HEALTH ASPECTS OF ADOLESCENT SEX, 1982

HEARING

BEFORE THE

SUBCOMMITTEE ON
AGING, FAMILY AND HUMAN SERVICES

OF THE

COMMITTEE ON
LABOR AND HUMAN RESOURCES
UNITED STATES SENATE

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SECOND SESSION

ON

EXAMINATION OF THE ALARMING INCREASE IN THE RATE OF SEXUAL RELATIONS AMONG ADOLESCENTS

APRIL 19, 1982

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CONTENTS

STATEMENTS

MONDAY, APRIL 19, 1982

	Page
Hofmann, Adele D., director, adolescent medical unit, New York University Medical Center, New York, N.Y., prepared statement	77
Humphrey, Hon. Gordon J., a U.S. Senator from the State of New Hampshire, prepared statement	3
Ratner, Herbert, former public health officer, and editor, Child and Family Quarterly, Oak Park, Ill.; Adele D. Hofmann, director, adolescent medical unit, New York University Medical Center, New York, N.Y.; John Hillabrand, obstetrician and gynecologist, Toledo, Ohio; Prabodh K. Gupta, department of pathology, Johns Hopkins Hospital, Baltimore, Md.; Naomi Chamberlain, president, Chamberlain & Associates, Inc., Washington, D.C.; and Ray E. Short, professor of sociology, University of Wisconsin, Platteville, Wis., a panel	4
Short, Dr. Ray E., professor of sociology, University of Wisconsin-Platteville, prepared statement	46

ADDITIONAL INFORMATION

Articles, publications, etc.:	
Checklist of Arguments For and Against Pre-Marital Sexual Intercourse	27
Intrauterine Device (IUD) and Actinomyces, by Prabodh K. Gupta, M.D., associate professor, the Johns Hopkins University School of Medicine	86
Ray Short Is Entertaining! But Is He Effective? You Be the Judge	30

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MONDAY, APRIL 19, 1982

U.S. SENATE,
SUBCOMMITTEE ON AGING, FAMILY AND HUMAN SERVICES,
COMMITTEE ON LABOR AND HUMAN RESOURCES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:47 p.m., in room 4232, Dirksen Senate Office Building, Senator Jeremiah Denton (chairman of the subcommittee) presiding.

Present: Senator Denton.

OPENING STATEMENT OF SENATOR DENTON

Senator DENTON. Good morning. This hearing will come to order.

This is an oversight hearing on title X of the Public Health Service Act, entitled "Health Aspects of Adolescent Sexual Relations." I want to welcome the witnesses and guests to this hearing, which is under the auspices of the subcommittee I chair, Aging, Family and Human Services.

During the past decade, we have seen an alarming increase in the rate of sexual relations among adolescents. Not only does a greater proportion of adolescent youth now engage in premarital sexual relations, but also a significant number has these relations at an earlier age. Those trends raise serious questions, among others, about the health of many young people, and these health questions are the subject of today's hearing.

The most obvious and the most discussed risk of adolescent sexual relations is pregnancy. The creation and nurturing of a new life, a third person, is the greatest life-affirming experience any mortal can have. But pregnancy can also disrupt the lives of unmarried young women and men who are not prepared for parenthood. It can cause medical and emotional problems for young girls, whether they carry the child to term or abort.

And, it goes without saying that the lack of preparedness for parenthood on the part of the young man and woman involved certainly has consequences for the child when it is born and as it grows up.

Because of the attention that the dangers of adolescent pregnancy and abortion have already received, this hearing is concerned primarily with other important health considerations associated with adolescent sexual relations.

Traditionally, an unmarried adolescent's decision on whether or when to have sexual relations, has been based to a large extent on values handed down within families, with the parental impartation

of these values achieved in one or more ways: by example; by verbal precept; by introducing the child to church, school, literature or other means by which moral standards are presented.

In the past 15 years or so, it is undeniable that many individuals have chosen free sex or promiscuous lifestyles, and much of our entertainment, our media and our literature evince and proclaim that a sexual revolution has taken place. Many of these influences implicitly and explicitly tell adolescents to look only to themselves for the answers to these complex, life-changing decisions.

Indeed, many Federal grantees preach that it is "OK" to have sexual relations and to use contraceptives, and if the contraceptives do not work, then simply have an abortion. The influence of parents is diminished by these other influences, and peer pressure is strong toward early sexual relations.

Many parents disagree that their children should join in the so-called sexual revolution, and there is a question as to whether or not there really has been a sexual revolution. Surprising to me is that so many kids are not becoming sexually active before marriage.

An increasing number of doctors and psychologists are coming to the view that the sexual revolution approach is not only dehumanizing, but also misleading. The mounting epidemic of venereal disease alone attests to the fact that there are issues other than pregnancy to consider before an adolescent engages in premarital sexual relations.

Certainly, the decision on whether to engage in premarital sexual relations can have a tremendous impact on future relationships and marriage, and that impact is, according to all the research and documentation, decidedly negative.

Whether it is psychologically or emotionally healthy to ask an adolescent to shoulder alone the burden of the decision to engage in sexual relations before marriage is an area we will discuss today.

Before an individual becomes involved in any activity, it is rational and responsible for the individual to be fully aware of all the possible consequences of the activity. This would appear to be true most especially when the actors are our children and the relevant consequences are as vital as those at issue here today.

The use of prescription contraceptives by adolescents is a matter that raises serious health concerns. With the increase in adolescent sexual activity has come an increase in use of birth control pills and IUD's. Medical research has demonstrated a number of health risks associated with the use of these prescription birth control methods.

It is mandatory, therefore, that when we make policy about birth control, we understand what may happen to adolescents who use Government-approved or provided drugs or devices. It is equally important to keep in mind the capacity, or lack thereof, of adolescents to understand and evaluate all the possible health consequences.

There is no disagreement that venereal disease is a major health threat today to adolescents. Nearly 85 percent of all reported cases of VD occur in people between the ages of 15 and 30, with those in

the 15- to 19-year-old group having one of the highest rates of VD transmission.

The incurable herpes simplex II, as well as possibly immune strains of gonorrhea and syphilis, must be considered. Cervical cancer and the transmission of fatal disease to newborn infants are but two possible consequences of herpes. The Center for Disease Control reports that the incidence of this disease is growing at a rate of 400,000 new cases a year.

When children begin sexual relations at earlier ages, the likelihood of their having multiple partners increases. This raises the probability of VD infection and cervical cancer.

The facts and expert assessments to be presented here this morning will be of great interest to those who make Federal policy. They will also have implications for clinics and physicians, pharmaceutical research and marketing, and, most important, the family. I look forward to a productive and enlightening session.

We will now receive for the record a statement by Senator Humphrey.

[The statement follows:]

STATEMENT OF SENATOR HUMPHREY

Mr. Chairman, I regret that other committee responsibilities will prevent me from attending the oversight hearing on title X to review the health aspects of teenage sexual activity. This hearing will provide members of the Senate important data that is needed to make informed decisions regarding adolescents and the family. I look forward to reading the testimony of the experts that you have gathered for this hearing.

Senator DENTON. It is my pleasure now to call our six witnesses for today's hearing, if they will please come forward, ladies and gentlemen.

On your right and on my left will be Dr. Herbert Ratner. He was director of public health for Oak Park, Ill., for over 24 years. He is the former chairman of the Maternal and Child Health Committee of the Illinois Association of Medical Health Officers and is presently the editor of Child and Family Quarterly. He is also the author of a critique of American medicine for the Center for the Study of Democratic Institutions. Welcome to you, Dr. Ratner.

Dr. Adele Hofmann—welcome to you—is a pediatrician and the director of the Adolescent Medical Unit of the New York University Medical Center. She is a past president of the Society for Adolescent Medicine and the first chair of the American Academy of Pediatric Section on Adolescent Health.

Dr. John Hillabrand—welcome to you, sir—has been a practicing obstetrician/gynecologist for over 45 years. He is a founding fellow of the American College of Obstetricians and Gynecologists and a founder of the Maternal Health Committee of the Ohio State Medical Association. He has appeared as an expert witness at over two dozen liability trials involving pharmaceutical companies and has acted as a medical consultant in dozens of other such cases.

Dr. Prabodh Gupta—did I pronounce that right, sir?

Dr. GUPTA. That is correct.

Senator DENTON. Welcome to you.

He is a member of the Johns Hopkins School of Medicine's Department of Pathology. He was recently described by the Washington Post as one of the Nation's leading pathologists.

Welcome to you, Miss Chamberlain. Miss Naomi Chamberlain is president of Chamberlain & Associates. She has worked the last 8 years developing adolescent pregnancy prevention programs in inner city neighborhoods and housing projects.

Last but not least, Dr. Ray Short; welcome to you, sir. He is a renowned author, lecturer, counselor and professor of sociology at the University of Wisconsin in Platteville. He has taught marriage and family college courses both here and abroad for over 20 years and is a member of the National Council on Family Relations.

You are sitting as a panel. I will ask you to make your oral remarks, limited to 10 minutes, if possible. All of your written statements will be included in full in the official record of the hearing.

I will ask Dr. Ratner to lead off.

STATEMENT OF HERBERT RATNER, FORMER PUBLIC HEALTH OFFICER, AND EDITOR, CHILD AND FAMILY QUARTERLY, OAK PARK, ILL.; ADELE D. HOFMANN, DIRECTOR, ADOLESCENT MEDICAL UNIT, NEW YORK UNIVERSITY MEDICAL CENTER, NEW YORK, N.Y.; JOHN HILLABRAND, OBSTETRICIAN AND GYNECOLOGIST, TOLEDO, OHIO; PRABODH K. GUPTA, DEPARTMENT OF PATHOLOGY, JOHNS HOPKINS HOSPITAL, BALTIMORE, MD.; NAOMI CHAMBERLAIN, PRESIDENT, CHAMBERLAIN & ASSOCIATES, INC., WASHINGTON, D.C.; AND RAY E. SHORT, PROFESSOR OF SOCIOLOGY, UNIVERSITY OF WISCONSIN, PLATTEVILLE, WIS., A PANEL

Dr. RATNER. Mr. Chairman, the problem we are facing is so great and has so many interwoven strands, and it demands such an extensive, sophisticated analysis that we can hardly do justice to the problem and its solution in a brief appearance before a Senate committee.

Despite the limitation on time, my hope is that I can introduce a new look at the problem which may stimulate a broader and deeper approach to the solution. There is an old saying that, "For every problem that is complex, difficult and many-faceted, there is a solution that is simple, easy and false." I believe this is the situation we are caught in right now and from which we must extricate ourselves.

We cannot afford to live out Kierkegaard's profound but tragic observation that, "The trouble with life is we understand it backward but have to live it forward." Civilization may not last if we do not better understand life as we live it forward.

My position is pragmatic, with emphasis on the need for a long-range approach with which few seem to concern themselves. It took several generations to get into our present mess; it will take one or more generations to get back to a sane society. Emergency solutions will not solve the problem. The short-range approach will do little for us in the long run. These are band-aids at a time when we need a tourniquet.

I venture to state without equivocation that with our current practices, we are generating more ill health than we are prevent-

ing. Iatrogenic disease—that is, physician-generated disease—is virtually epidemic, especially in the area of reproductive medicine.

Let me specify this in respect to controlling pregnancies in adolescents through contraceptive education and through the dispensation of contraceptives in clinics. Despite the expenditure of huge sums of money and the assignment of large numbers of medical personnel, both public and voluntary, to this problem, the following seems to be the outcome.

(1) The number of abortions keeps increasing annually, irrespective of social class and educational attainment, whether among college women from the suburbs or inner city youngsters from junior and senior high schools.

(2) Pregnancies keep occurring at younger and younger ages.

(3) The suicide rate among teenagers keeps increasing, and the rate is higher among the sexually active who are not pregnant than among those who are pregnant.

(4) Promiscuity keeps increasing with greater detriment to health both bodily and emotional. To the body: because of the detrimental effects of the oral steroid—namely, the pill—among those using it; because of the increase of pelvic inflammatory disease and ectopic pregnancies amongst users of the IUD; because of the sharply increased venereal disease rates, more epidemic than ever before in public health history despite all of our miracle drugs.

Twenty five years ago we thought that by tracking down contacts, we could eradicate syphilis. Today we know that is practically impossible. The Center for Disease Control states and calculates that in the ages between 15 and 19, close to 12 percent have experienced a venereal disease.

In the case of genital herpes, there are an estimated 20 million cases in the United States at present, and it has been estimated that new cases are developing at the rate of one-half to 1 million cases yearly.

To the psyche: because depression caused by the pharmacological effects of the pill which are particularly dangerous because of its insidious nature; because of depression caused by the lack of fidelity of the boys. Most of the girls are getting depressed.

As Gebhard's figures show—he repeated the Kinsey studies made 20 years earlier—most girls (50 to 60 percent) when they give up their virginity have marriage in mind, but few boys do (11 to 14 percent).[1] The situation has worsened since.

Concerning the pill, which in testimony I declared, at the Nelson hearings in 1970, to be chemical warfare against the women of the world, a fact which since then has been overwhelmingly confirmed by the medical literature. I should point out here that in 1970, all those who criticized the pill turned out to be right and all those who defended the pill turned out to be wrong.

Let me give you some specific details on the pill. This is in respect to mortality: "There were more deaths from adverse effects of oral contraceptive use than from all complications of pregnancy, delivery and the puerperium combined," and here I am quoting a

[1] Hoyman, H.S. Sex and American College Girls Today. Editor's Comment. "Child & Family," 7:37, 1968.

prominent English epidemiologist, Valerie Beral, in an article that appeared in 1979.[2]

(2) The death rate from diseases of the circulatory system in women who used oral contraceptives is five times that of those who have never used them. This is a quote: "The excess was substantially greater than the death rate from complications of pregnancy in the control group, and was double the death rate from accidents.", which comes from a study of the Royal College of General Practitioners, where they discussed mortality among oral contraceptive users.[3]

It is important to point out that when people defend the pill and say it is less dangerous than pregnancy, they mislead by using a gross maternal mortality rate. But the fact is that most deaths in pregnancy are found in the high-risk categories—a bad heart, diabetes, so forth and so on. "When it comes to the prime users of the pill—young women who are in good health—the death rate from pregnancy is negligible," and I am quoting here Dr. Louis Hellman, who was a great promoter of the pill.[4]

(3) Close to 100 disease conditions are associated with the pill. This includes even vitamin deficiencies that are difficult to correct, and abnormal changes in the concentration of trace minerals.

(4) Over 100 laboratory tests are affected by the pill resulting in abnormal findings.[5] As one expert has said, "The problem in pill development is 'to minimize the metabolic mischief of the pill.' "[6]

(5) What is clear now is that if we knew in 1960 what we know now, the pill never could have been approved by the Government under the Kefauver-Harris amendment. We should also reflect on the following, because here you are hearing the voice of the consumer.

(a) Among physicians recommending the pill to their patients, 72 percent of the wives practicing birth control would not use it, and among those who did use it, 40 percent changed to another form of contraception within 2 years. This is from a study that came out of Albert Einstein Medical School in 1972.[7]

(b) And this is the most telling point, it seems to me—70 percent of the providers of the pill in Planned Parenthood clinics reject the use of the pill as a personal birth control method.[8]

(c) Of course, everybody should know by now that the leading feminists are rejecting the pill.[9] If you want to hear one of the

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[2] Reproductive Mortality. Brit. Med. J., Sept. 15, 1979, pp. 632-4.

[3] Royal College of General Practitioners' Oral Contraceptive Study. Mortality Among Oral Contraceptive Users. Lancent, Oct. 8, 1977, pp. 727-30.

[4] Hellman, L., Chairman, Advisory Committee for Obstetrics and Gynecology, Food and Drug Administration. "A Doctor's View of Birth-Control Pills." Redbook, April 1969, p. 60. "A healthy young girl runs a very negligible risk. * * * So to say that the risk in taking the pill is less than the risk in having the baby doesn't make much sense."

[5] Weidling, H. and Henry, J. B. Laboratory Test Results Altered by "The Pill." JAMA, 229:1762-8, 1974.

[6] Briggs and Briggs. Med. J. Australia, Dec. 28, 1974, pp. 942-3.

[7] Wassertheil-Smoller, S. et at. Contraceptive Practices of Wives of Obstetricians. Mimeographed Copy of Paper Presented at the American Public Health Association Annual Meeting. Atlantic City, Nov. 16, 1972.

[8] Hatcher, R. A. and Trussell, J. Contraceptive Use Among Family Planning Clinic Personnel. Perspectives, 13:22-3, 1981.

[9] Seaman, B. "The Doctor's Case Against the Pill." Doubleday & Co., Inc., New York, 1980. Introduction by the Boston Women's Health Book Collective.

sharpest criticisms of the pill, get Germaine Greer, author of "The Female Eunuch," to come down and testify.

(d) It should also be known that several countries have never approved of the pill for contraceptive purposes because of the medical hazards. This particularly is the case with Japan; it also applies to Russia and Israel. I understand from a person I spoke to who recently returned from China that some communities distributing the pill are now having second thoughts on the pill.

(e) Finally, teenagers themselves have caught on to the pill and are rejecting it in high numbers. There is much in the medical literature on this.

I edited a booklet, "The Medical Hazards of the Birth Control Pill," in 1968, and nothing has had to be retracted since then.[10] We are still receiving orders for this book by the hundreds. It is one of the few publications available to the public which gives an objective account of the pill.

So, it should be obvious by now that the pill and the IUD do not represent any basic solution to teenagers' problems and it jeopardizes their health. It is a short-range approach which compromises the future health of adolescents and compounds the future health care problems and the burdens of government in terms of the excessive costs and strain on the health care systems.

I may add here that Planned Parenthood and other family planning clinics, since they do not give total medical care, never see the complications they cause. It is only family physicians, groups that give total medical care and emergency rooms of hospitals, and so on, that really know what is happening; the family physician, in particular, because he cares for that adolescent into adult life, and can best see the consequences and the regrets of using these powerful synthetic chemicals, many of whose effects do not show up until later life.

Many sexually active women are discovering the flaws of a carefree life on their own which has given rise to a new movement, called the New Celibacy.[11] So, the time has come for a long-range approach to the problem of the teenager.

I should point out, by way of introduction, that the following are not the scholarly literature that I customarily refer to, but Rolling Stone, on March 4, 1982, did feature an article described as, "Herpes, the Pill, V.D.: Why Sex Is Not Fun Anymore."[12] This discovery is progressively becoming widespread, and maybe it will turn into a new celibacy movement not unlike the old.

In closing, I praise you for realizing that the time has come for a better and long-range approach to this problem. We should recall here that the American Cancer Society and the U.S. Public Health Service spend millions and millions of dollars annually promoting abstention from cigarette smoking as their prime educational program. Unfortunately, they do not seem to have the same concern about cervical cancer, where the data is definite that early sex and multiple partners leads to a high incidence of cervical cancer.

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[10] Ratner, H. (Ed.) The Medical Hazards of the Birth Control Pill. "Child & Family Reprint Booklet," 1969.

[11] Schoen, E./Hers. The New Celibacy: The "ideal date" goes dateless. New York Times. Sept. 27, 1979.

[12] Levy, S. The Birth Control Blues. Rolling Stone, Mar. 4, 1982.

Apparently, however, anything medical that speaks against sexual promiscuity has diplomatic immunity; and accordingly is not publicized to the laity.

If the American Cancer Society and the U.S. Public Health Service can promote abstention from cigarette smoking; if the American Heart Association can promote abstention from a high-fat and a high-animal-fat diet, if a half a dozen other organizations can promote abstention from a variety of other pleasures from junk food, mood elevating drugs, alcohol and so forth, why are we so reluctant to promote abstention from teenage sex when it is so clear that it is detrimental to their future health and happiness and, furthermore, in women jeopardizes fertility, a woman's greatest treasure, by virtue of the sterilizing complications of the pill, IUD, abortion, and venereal disease?

Young girls have to be told that they only have one body; that it is not a rehearsal body which can be turned in for a new one after the fun is over; that it is a body that has to last a lifetime. They must be persuaded to take good care of it.

I close with a penetrating induction from a Nobel prize winner, an internist, Dickinson Richards. It is taken from a Johns Hopkins Symposium entitled "Drugs in Our Society," published in 1964.[13] I want everybody to reflect on it because it updates an old saying, "God always forgives, man sometimes forgives, nature never forgives."

Here is what Richards says:

> Let man make the smallest blunder in his far-reaching and complex physical or physiological reconstructions, and nature, striking from some unforseen direction, exacts a massive retribution.

With this in mind we should begin to realize that the real opponent of sex permissiveness is not old fashioned morality and religion but nature and nature is not negotiable. Nature strikes back and nature retaliates because nature has no choice.

This thought first came to my attention many years ago when I came across a book at the New York Academy of Medicine entitled "Nature Hits Back," by an English psychiatrist.[14] It revolutionized my whole life as a physician.

If I have a minute or two left, I would add this. Playboy has a very interesting series on sex by two women scientists. They take a position counter to the current and fashionable notion that originated with the feminists and some social scientists that sexual roles are determined culturally and are in no way predetermined by biology.

They point out, as has Alice Rossi,[15] a socioligist who reversed her earlier feminist position to conclude there are certain governing biological fundaments that cannot be dismissed. The Playboy authors conclude, and in Playboy of all places, that the mode of reproduction characteristic of the human species is monogamy.[16] If

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[13] Talalay, P. (Ed.) "Drugs in Our Society." The Johns Hopkins University Press, Baltimore, 1964, p. 34.

[14] McPherson, L. "Nature Hits Back." Methuen, London, 1936.

[15] Rossi, A. A Biosocial Perspective on Parenting. Daedalus, spring, 1977, pp. 1-31. Reprinted in "Child & Family, 17:88-125, 1978.

[16] Durden-Smith, J. and DeSimone, D. "Man and Woman. Part 1. The Sexes: A Mystery Solved?" Playboy, January 1982, p. 288.

this is true I can virtually guarantee the teenagers and the professionals who go along with them that if nature is challenged by early promiscuous sex and multiple partners they will discover sooner or later that nature will strike back and exact a retribution.

In fact, in the Rolling Stone article referred to above, the author makes the same point in these words, it seems "like some wrathful deity is exacting revenge for our decade-long orgy." If Rolling Stone can entertain this notion perhaps, also, can the more medically sophisticated except for them the diety is nature. Along these lines there is another development which presently baffles us and may turn out to be another example of nature retaliating. I refer to the sudden, sharp rise in a cancer known as Kaposi's sarcoma, in homosexuals.[17] It is associated with anal intercourse. We have not the slightest idea why homosexuals should be more susceptible, but maybe nature is telling us something. Thank you.

Senator DENTON. Tha .k you, Dr. Ratner. Dr. Hofmann?

Dr. HOFMANN. Thank you, Senator. I would just like to add to my credentials that I have been involved in the primary care of adolescents for almost 20 years, and have worked with the yippies, the hippies, the flower children, the voluntary white poor, the youth movement of the sixties, and the post-Vietnam war youngsters. I am here today because I care about teenagers and I think I know them very well.

In addition, I have recently completed a review of the world literature on contraceptive use in teenagers commissioned by the World Health Organization, for whom I have been a temporary adviser, and I would like to present some of this information to you today.

Unfortunately, Dr. Ratner, I am going to take great issue with you, and do not agree with all of your perspectives about contraception for adolescents in terms of my own evaluation—an honest difference of opinion.

This is an extremely important topic in that recent publicity on this issue has greatly exaggerated and even misrepresented, in my estimate, the health risks of prescription contraceptives for adolescents.

Due to the constraints of time, I am going to limit my remarks to a brief review of oral contraceptives and the intrauterine device as the primary ones raising significant questions about potential harm. But I ask that you also refer to my written testimony for additional details and commentary on other methods.

No method of contraception is perfect either for adolescents or adults. None is completely effective, and none entails absolutely no risk. However, such risks as do exist must be examined in light of the far greater hazards of pregnancy to sexually active adolescents.

According to the Food and Drug Administration's patient packet insert for oral contraceptives, a woman, whether teenager or adult, is six times more likely to die consequent to pregnancy and delivery than from using any type of contraceptives—a point of signifi-

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[17] (a) Altman, L. K. "New Homosexual Disorder Worries Health Officials." New York Times, May 11, 1982.

(b) Jensen, O. M. et al. "Kaposi's Sarcoma in Homosexual Men: Is It a New Disease?" Lancet, May 1, 1982, p. 1027. "Our investigation confirms that Kaposi's sarcoma among young homosexual men in Denmark is most likely to represent a truly new disease entity."

cant departure, Dr. Ratner, and I do not think that the data have selectively taken only those at particularly high risk.

Turning first to oral contraceptives, or the pill, this is the most frequent prescription method used by adolescents. The first concern relates to the possible adverse effects of oral contraceptives on a teenager's growth. There is, however, no clinical evidence to bear out this hypothesis.

While estrogen has been used in very tall girls to curtail ultimate height, the amount required is 10 times more than that used for contraception. No study has ever documented a pill-associated reduction in predicted height in contracepting adolescents.

The second concern relates to possible interference with the maturing endocrine system and achievement of regular ovulation. At least one recent study of more than 200 girls belies this supposition, finding a prompt return, on discontinuation, to normal hormonal values, menstrual patterns and ovulation in a group of young adolescents who had used the pill for extended periods of time.

In addition, studies of girls with excessive height given high-dose estrogen to arrest growth show that almost all also returned to regular menstruation within a few months of the end of treatment, which had lasted for 1 to 1½ years.

Nor is there any data suggesting that postpill amenorrhea, if indeed such a syndrome exists, has a higher frequency in teenagers than older women. The conclusion of several notable researchers that postpill infertility is, at best, an unfounded concern and, at worst, a modest problem usually responsive to treatment would appear to apply to adolescents as much as to adults.

Several types of cardiovascular disease have been associated with oral contraceptive use. This is primarily due to a reversible alteration of blood-clotting factors, although changes in blood lipids may be contributory as well. The degree of estimated risk varies with the specific condition involved and the coexistence of other predisposing factors.

For example, age and smoking increase the risks of heart attacks and cerebral stroke; 15- to 19-year-olds, whether they smoke or not, are at the lowest risk of all age groups. Nor is there evidence that adolescents are at any greater risk of thrombophlebitis, and possibly even less.

I was unable to detect even a single case report in the world literature of a pill-related death of an adolescent due to any form of cardiovascular disease, or for that matter from any complication of the pill. Case reports of any type of nonfatal complications in adolescents specifically are singularly difficult to find.

It should be noted, however, that these observations do not apply to conditions contraindicating use in adults, such as liver disease, hyperlipidemia, and hypertension. They also are contraindications for use in adolescents. It is worth noting in this connection that conditions precluding pill use are easily detected by physical examination, routine laboratory tests, and simple questioning about medical facts well within the knowledge of most adolescents.

Much concern has been raised about a possible relationship between the pill and cancer of the breast, uterus, cervix, or liver. The vast preponderance of current evidence indicates no increased risk

of breast cancer due to oral contraceptive use. Moreover, the pill is now recognized to be protective against benign or noncancerous breast disease.

In addition, there is no increased risk of cancer of the uterus with currently employed preparations combining progesterone and estrogen together. Current evidence also fails to support any association between pill use and cervical cancer or the precancerous conditions of dysplasia and carcinoma-in-situ.

The recent rise in incidence of cervical dysplasia among sexually active adolescents now appears to be due exclusively to an early age at first intercourse and frequent coitus with multiple sexual partners rather than contraceptive use.

While there is a small risk of benign, noncancerous liver tumors with pill use, no cases have been reported in adolescents, and the greatest incidence is in women over 27 who have taken the pill for at least 7 years.

Turning to the intrauterine device, one significant problem is expulsion, but this is primarily associated with whether or not the woman has borne a child, not whether she is an adolescent. Those who have never borne a child have higher expulsion rates. Moreover, newer types of IUD's have significantly lower expulsion rates.

A second complication is an apparent, relative increase in ectopic pregnancy in IUD users, but this risk does not appear to be any greater for adolescents than others. Indeed, a number of reports on IUD use in this age group do not reveal a single case of ectopic pregnancy among some 500 users, although it undoubtedly occurs, and probably at a rate similar to that for older women.

I do concur in my findings with a major concern for IUD use in teenagers in relation to pelvic inflammatory disease, or PID—an infection of the fallopian tubes generally caused by bacteria, primarily gonococcus and chlamydia, but on rare occasion by the fungus actinomyces.

PID is highly correlated with the same factors as cervical dysplasia; namely, an early age of first intercourse, frequent coitus, and multiple partners. If an IUD is in place, the risk of contracting pelvic inflammatory disease is further increased by a factor of 1½ to 4, depending on the particular study.

The major significance of PID is an increased risk of ectopic pregnancy and infertility. Estimates of infertility following a single episode of PID range from 18 to 37 percent.

Oral contraceptives and the diaphragm, as well as condoms and foam, all have a significant place in family planning initiatives for adolescents. The intrauterine device, in my estimate, also should be considered for married adolescents and, selectively, for those who are unmarried but have failed repeatedly with other methods, have experienced one or more past pregnancies, are at risk of further pregnancy, and can be treated promptly in case of intervening pelvic infection.

With the exception of an increased risk for pelvic infection in IUD users frequently exposed to sexually transmitted diseases, contraception in adolescents appears, on the basis of the world literature, to be remarkably safe. There is good argument that unmarried adolescents should not be sexually active because of the possible consequences to their physical and emotional well-being. But

despite what you or I might wish, many young people are making the decision to engage in intercourse.

As a physician, my primary duty is to protect the health of my young patients. I cannot concur in steps which render this impossible by making contraceptives unavailable to sexually active adolescents consequent to the denial of confidential services. The toll occasioned by an unplanned pregnancy in adolescents is far, far too high. I could only justify denying confidential care if I had grave concerns about the ability of my patients to give fully informed consent, and in my experience the overwhelming majority of adolescents, given appropriate guidance and counseling, are able to make effective contraceptive decisions.

Senator DENTON. Would you repeat that sentence, please? I did not understand it; I did not hear it all.

Dr. HOFMANN. As a physician, my primary duty is to protect the health of my young patients, and I cannot concur in steps which would make it impossible for me to do so by making confidential services unavailable to teenagers. Confidentiality is essential to the physician in rendering adolescents health care of a wide variety of sensitive natures. It is essential that they have access to me or my colleagues, to be able to receive services in confidence.

Senator DENTON. Confidentiality means that you alone deal with them, excluding everyone else, including parents. Is that what you are getting at?

Dr. HOFMANN. No, sir. It means that if I am going to treat them, they must have access to me under those circumstances.

Senator DENTON. Under what circumstances?

Dr. HOFMANN. Confidential circumstances.

Senator DENTON. And I am asking you to define confidentiality.

Dr. HOFMANN. I will not reveal to others without their permission or unless I feel that they are in serious jeopardy of greater harm on leaving my office. I would not, for instance, reserve confidentiality in relation to suicide. I would regularly notify——

Senator DENTON. In relation to suicide, did you say?

Dr. HOFMANN. If the young person were to tell me that they were going to commit suicide on leaving my office, but they did not want me to tell anyone, that is obviously something that I am not going to observe.

In my experience, what I do feel is, that a young person is not going to tell me anything of significance if she feels I am going to tell her parents, or that she has to have her parents' consent to get to me. Once she gets in, I do make every effort to involve parents.

Senator DENTON. You make every effort to involve parents?

Dr. HOFMANN. Absolutely, sir. I might say that in the older youngsters, say age 17, I do not. But, certainly, for adolescents age 16 and under, it is a part of my regular procedure to discuss with them, "Can you involve your parents?"

Obviously, I always work toward involving parents with drug abuse problems, because I cannot work with a drug abusing youth unless parents are involved. Obviously, if a girl is pregnant and going to term, I must also involve the parents. It is a total family problem. We are very anxious to involve parents in instances when there is an abortion.

But, I happen to work with a largely Hispanic population and have literally seen young women thrown out of their homes, forced into an early marriage, and suffer such devaluation that the family unit was almost destroyed over contraception or abortion. So, I do have to reserve the right of confidentiality with my young patients—and I know this is true in other instances—not just to be able to gain access to me, but in order to be able to have them speak to me at all and to tell me their problems, because they are not going to tell anybody else and they are not telling their parents.

I would like to negotiate parental involvement, but I find it extremely difficult to work in a situation which mandates it because what this will mean essentially is that young people will not come to seek health care including contraception and will not really alter their sexual patterns with the risk of pregnancy.

We are conducting some research at present to explore the specific question, and we find that in our population, which is a general primary medical clinic for adolescents in which we do give contraceptives as well as a wide range of other health services and continuity care over time to these young people, very, very few of them would come for services or tell a physician that they are sexually active, even though they would have no intention of ceasing this sexual behavior, if parental notification were required.

Senator DENTON. This hearing is not intended to go into that, but since you brought it up, I wanted to make sure I had clear what you meant by confidentiality and the qualifications to that statement, some of which you have gone into.

Dr. HOFMANN. Health care services—or how health services are delivered—are terribly important for teenagers in relation to this particular hearing. I think that some of the things that we have learned through considerable experience, particularly about the need for confidentiality, go far beyond the legislative proposals—although I was addressing those indirectly—and very much relate to the health meeds of adolescents. In my view as a physician, it is essential that the physician be given the opportunity to use his or her best judgment on this matter in helping the patient. This includes parental involvement whenever possible, but maybe not in every case. Thank you.

Senator DENTON. Thank you, Dr. Hofmann. Dr. Hillabrand?

Dr. HILLABRAND. Did you address me, Senator?

Senator DENTON. Yes, sir, I did, Dr. Hillabrand.

Dr. HILLABRAND. Thank you.

Senator DENTON. I asked you to go ahead, sir. I am sorry if I did not speak up.

Dr. HILLABRAND. Well, I am a doctor from Toledo, a board-certified obstetrician of some 45 years' experience. I have delivered some 8,700 babies without a maternal death. I am reasonably proud of that.

Among my credentials and my reason for interest in these affairs is that I have been identified with a service organization for the past 12 years which gives assistance to girls who might be considering abortion, are under pressure to have an abortion, and can be helped by the centers of this country, which now number more than 1,100.

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We are an international organization, under the name of Alternatives to Abortion International, which we describe as a prolife, emergency pregnancy service foundation. We are not political in any way; we are tax-exempt, so we have to be.

But my interest in these people that I have worked with for 12 years now gives me some insight into the problems involved in problem pregnancies. The second thing is my identification with the courts, in which for the past 12 years I have been appearing as an expert witness on behalf of plaintiffs of all ages, Dr. Hofmann, who have gotten into disasters as a result of taking pills.

This has included death from thrombophlebitis and pulmonary embolism, gangrene of extremities, heart attacks, diabetes, and all sorts of serious problems which are indeed iatrogenic, to use Dr. Ratner's term, because they are physician-induced.

I would like to get fundamental to begin with on the question of the birth control pill itself, not as a teacher, but to have you think along with me as to what it is. It contains two basic ingredients, one of which simulates the estrogens of the body, and the other simulates the progestins of the body—the sex hormones, the steroid hormones.

However, the important thing to remember is that the ingredients of the pill are not hormones. No one who makes them claims them to be. They cannot be handled in the human body in the way natural human hormones are, and they can spell disaster because the estrogens and the chemistry of them have to be digested by the human disposal, which is the liver, and these powerful synthetic chemicals are not so constituted that the enzymes of the body can digest them and dispose of them as they would normal estrogens in the body; similarly with the progestins which are made to resemble and have a powerful action resembling progesterones, but cannot be disposed in this way.

Now, these chemicals try to go through the liver, but many times they just do not make it. This is verified by the chemists that work on the current problem of tumors in the liver found in those people of all ages who take birth control pills, which can result in hemorrhage and death, and this is in the literature of the drug companies themselves. So, I am not advancing any opinions of my own.

The drug companies, specifically Syntex and Cyril, state that among the pill-takers, it has been reported that the incidence of liver tumors and liver adenomas is 16 times as great as those who do not take the pill. These do result in deaths in takers of all ages.

Now, it is one thing to preach that the pill is dangerous, but the day might arrive when the pill is made to be less dangerous or, in fact, not dangerous at all. On the stand, I am frequently posed with the question, "Well, doctor, you are against the pill. If we had a perfectly safe pill, you would be against it, would you not?"

I say, "You ask me a question which is loaded," because if it were perfectly safe, it would not prevent the first pregnancy, and if it were not perfectly safe, you have exactly what we have here. So, it is a contradiction in terms to consider a perfectly safe pill.

Now, what does the pill do? According to the original claims, it acted by suppressing the pituitary, which in turn then did not produce the hormones to stimulate the ovary to produce eggs. This was its primary mode of action, to inhibit ovulation.

Well, that sounds great, and it works and it is effective, and this is both a blessing, a hazard, and a risk because when you suppress the pituitary, you are, in fact, suppressing the master hormone-controlling gland of the human body. We are still learning what the pituitary does. Among other things, it regulates the function of the thyroid and the adrenal, without which we die if we do not have proper adrenal function; the gonads; and in this case, our particular interest in suppressing ovulation.

I would take it upon myself to disagree diametrically with the previous speaker. She is well intentioned, but she somehow or other does not seem to comprehend the effects of the pill on teenagers. Even the drug companies themselves advise that in teenagers that have irregularity, the pill not be used because it can contribute to this. It decommissions the pituitary, in effect.

Imagine, if you will, if we turned off the power in Dr. Ratner's O'Hare Airport there—the control tower. What would happen to the traffic? And let me tell you that the physiological processes of the human endocrine system are much more complicated than the traffic in O'Hare Airport. When you turn this off and suppress it, and plan to do it over a long period of time, then you are in trouble especially with youngsters. They can be decommissioned and made to be menopausal, so to speak, for a protracted and unpredictable period of time.

Senator DENTON. Sir, may I interrupt you just for a moment? I was going to ask Dr. Hofmann that question later, but I am afraid I might forget it.

This patient package insert—PPI, as it is commonly referred to—required by the Food and Drug Administration in the birth control package, says, under the title "Who Should Not Use Oral Contraceptives":

> If you have scanty or irregular periods or are a young woman without a regular cycle, you should use another method of contraception because if you use the pill, you may have difficulty becoming pregnant or may fail to have menstrual periods after discontinuing the pill.

It would appear that this should be corrected if you are correct, Dr. Hofmann.

Dr. HOFMANN. I think it should be, sir, on the basis of current information. I think there are some theoretical reasons for including such a statement in the PPI, but there is no confirmed medical evidence that use of the pill in the immediate post-menarcheal period will in fact interfere with ovulation. And there are several studies done by very responsible and reputable endocrinologists, particularly in girls who received 10 times the estrogen dose in oral contraceptives for over a year-and-a-half in relation to the reductions of predicted height in the immediate period surrounding menarche who have been shown to regularly ovulate and regularly return to normal menstrual function on discontinuation.

I shared the doctor's concern until my review for the World Health Organization, but have since revised my opinion. Responsible professionals including obstetricians and gynecologists had led me to, to take this position as stated in the package insert. Unfortunately, when you analyze the available evidence, it really suggests that the hypothalamic ovarian axis is singularly resistant to

such suppression. This is, I think, a surprising conclusion, but a valid one based on my information.

In practice, however, I do not prescribe the pill to girls with irregular menses because a number of them may have truely dysfunctional problems—not simply immature cycles—and we simply do not know whether the pill will aggravate dysfunctional problems and resultant infertility. So, because we cannot differentiate between normal menstrual irregularity right after menarche begins and what might be a dysfunctional problem, we generally do not give the pill until regular menses are established. But where estrogens have been used in early menarche in normal girls, there really is no evidence of persistent suppression of ovulation at all.

Senator DENTON. So, you do or do not agree that young girls who do not have a regular menstrual cycle yet should avoid use of——

Dr. HOFMANN. Well, I probably would not use them. I do not think there is any clear, laboratory case-study evidence that there is a special hazard to them. What can I say? I would rather be conservative even though there is no confirmatory evidence. But I do not think this contraindication is substantiated in the literature.

Senator DENTON. Thank you. I am sure we will go into these different indications of findings later because there appears to be some conflict.

Please forgive me, Dr. Hillabrand, but I thought that the question should be brought up at that point to clarify Dr. Hofmann's and your disagreement on that subject.

Dr. HILLABRAND. There is a disagreement here, I am sure, and I appreciate your raising the point. It is a little bit difficult to refute these unnamed famous authorities of the world, when the true experience of people who work in this field—namely, myself, and I have now accumulated over 947 cases of amenorrhea which include pill takers and nonpill takers, and I find that it is eight times as great among the pill takers as among the nonpill takers in the adolescents. Now, I am talking about teenagers entirely.

This is my experience. I am a clinician; I am an obstetrician. I examine the patients and I make the diagnosis, and I do my own cytology in the office for hormonal evaluation on these girls. I find it a disaster to give this pill to adolescents whose pituitary ovarian access has not matured and become stabilized. And when you interfere with this with a powerful synthetic chemical and you cannot predict its effect, then you subject these people to tremendous physical hazards which can endure and ruin their whole life in the future, and I have seen it happen.

Now, supposing we had a pill that is perfectly safe, then we would do something else to the girl, and this destroys something about their personality and their personhood and their value as a person. And I see this happen all the time, because girls come in whose mothers bring them in and ask planned parenthood offices in our own building to give them the birth control pills so they will not come home pregnant.

In effect, you are telling a teenager, "I do not trust you. You are not trustworthy." If we take kids like this and destroy their value system and their ideals and everything that they hold important in life by saying, in effect, "You are no good; nobody can trust you; we have got to give you the pill or you will come home pregnant," I

think this is something that you cannot put into words, but I see this happen all the time—the destruction of kids.

As Dr. Margaret White, in London, one of our trustees in AAI, expressed it, the family planning association goes out and teaches in the school that if you take the pill, this is going to be the answer; we will not have all of these illegitimate pregnancies in England. They find, to their consternation then, that the kids do not stay on the pill. They get pregnant and they get the venereal disease, and the family planning association, the counterpart of our planned parenthood, says, "Well, we did not start soon enough, obviously. We are in trouble; we need to start sooner."

So, they take the methods that do not work and then apply them to earlier and earlier and earlier ages, and it backfires every time and we ruin these kids. But what do we do in this epidemic of venereal disease, which includes all of these things which we have to deal with?

The gonorrhea is at epidemic proportions. There was a news release last week in Florida that it is burgeoning down there. It is completely out of control; they do not know how to handle it. All these people that have herpes—we cannot even make the diagnosis. We have no cure for it, and it ruins people in their pregnancies. They are having to have cesareans now, in a climate where we are embarrassed by the incidence of cesareans that we obstetricians are performing now.

I find that this and the IUD's are, in fact, a curse on the youth of this country. As Harold Williams, one of the pioneers on the pill—he was both a doctor and a lawyer. In the beginning, he got so excited he wrote a book. He said, "Pregnant or Dead?" In addressing Reed College in Portland, Oreg., he described this as the people polluters—the pill and the IUD's—because they do do these things, many of which are irreversible in our youth, and this is where our value is in our youth. If we do not bring them up with value systems, we are in trouble.

I think the IUD's—forget expulsion of them. You think about PID which is so rampant today—pelvic inflammatory disease—which will ruin our youth. I think when we neuterize our girls with these things, we are doing something that we cannot replace and undo. We do not have any penicillin when we do this, and we convert them into sexual playthings for the entertainment of young males at what price? It is an inestimable price.

Senator DENTON. I cannot help remarking, Dr. Hillabrand, that the feminists, and the Congress does not lack some, are in total agreement about pornography and the overall implication of what you have just said; that if a woman is regarded, and regards herself, as a sex object, the feminists do not like it, the profamiiy people do not like it, and I do not think nature likes it.

Dr. HILLABRAND. Well, in that sense, I am a great feminist myself. I am not against sex. I do not think anything has been invented that is quite that good, but there is a bottom of the barrel. I make my living on sex; I am not speaking against it. With delivering 8,700 babies and being an expert, so-called, in infertility, and knowing something about fallopian tubes and ovaries, I should be able to speak. And I say that this is what is defeminizing people, and in that sense I am a great feminist. I think mothers and babies

are indispensable, and the ruination of mothers, babies, and families is at the root core of our evils of society today.

You forget heaven, hell, sin, virtue, bible, church, and anything else, and look upon women as something valuable. Should not they, in their own self-interest, be doing something to protect themselves? Dr. Hofmann wants to protect their health, and I congratulate her. I know she is sincere, but in my opinion extremely misguided, and she is being misled by the drug companies that put out things like this.

It went on for 6 months. "She is 16 years old. She has made the decision to be sexually active." She could not buy a car or even get her ear lobes pierced without parental consent.

Senator DENTON. Nor vote, nor serve her country.

Dr. HILLABRAND. She has made the commitment to be sexually informed or responsible, ergo give her Norinyl 135, as though this solves all her problems. Now, these are paid ads. Incidentally, there are, according to reports today, over 50 million customers taking the pill.

There is a profit motive, which I am not against. Doctors are supposed to be Republican and wealthy; I guess they are wealthy.

Now, the last issue of the journal of Ob/Gyn has got a 6-page ad describing a breakthrough in the pill here by Cyril, using the same ingredients, tinkering with the doses of them, which does not do anything except confound the physician, who will then go out and tell the girls that the pill is safe, and they will believe him.

Now, one last thing. I have used up too much time, but I want to put to rest once and for all this idea that pregnancy is more dangerous than contraception, and that pregnancy is more dangerous than abortion. I do not know where these ugly rumors get started.

Dr. John F. Dwyer, and I am quoting, from Bellevue Hospital in New York—I guess they have heard about it in Washington—he took care of over 200 kids and he found the incidence of complications lower among teenagers, and they are all under 16. Even in those under 14, they were lower in these people who were carefully monitored than they were in adults and professionals. They had fewer cesarean sections, fewer cases of toxemia, fewer cases of obstructed labor. The only thing they had more of was prematurity, which is not a catastrophe today with all our sophisticated pediatric, intensive care, and neonatal care.

I would love to talk for the next week and answer your questions for a month, but I would yield the floor.

Senator DENTON. Thank you, Dr. Hillabrand.

Dr. Gupta?

Dr. GUPTA. Thank you, Senator, for inviting me to talk here. My colleagues on the right have already said most of the things that I intended to speak on this morning, but I shall be a little more objective and a little less emotional and personal in what I say. I think what I am telling is what can be seen and experienced and felt by anybody; it is all scientific truth.

The intrauterine device, IUD, is the second most commonly used method of contraception in the world. It is believed that there are about 60 million women in the world using IUD's, out of which about 40 million are used in China, and nearly 3 million women of the active reproductive age group, between 14 and 44 years of age,

employ IUD's in this country. Present popularity of the IUD stems from its relative cheapness, effectiveness, and general acceptability as a safe and probably reversible mode of contraception.

Despite being convenient and popular, the use of the IUD has always been controversial. Since its inception, infections and expulsion of the IUD were noted as frequent complications among young nulliparous women.

Senator DENTON. Pardon me, sir. What is nulliparous?

Dr. GUPTA. It is a woman who has not borne any children; most commonly, adults and teenage girls below 20 years old, or who have been married but do not have a child.

Infections—local, intraabdominal and generalized—have been associated with the use of IUD's. Many changes, including use of monofilamentous carrier thread, changes in design and shape, and availability of IUD's in various sizes, have been made. Recommendations and precautions for use of IUD's have been modified in order to minimize the complications and make IUD's more acceptable by women and nullipara who have smaller uteri and other internal organs.

Currently in the United States, available IUD's fall into basically two categories. One is the mechanical type, which includes the lippe's loop, saf-T-coil, or variations thereof, and No. 2 are the medicated IUD's which generally have a metal, like a copper, including copper-7, copper-T, or a variation thereof, or may have an impregnated hormone, most commonly progesterone, as a part of the IUD.

Irrespective of the design of the IUD's available in this country, all IUD's have a tail or a thread with which the IUD communicates with the external environment, thus permitting an easy access to the infective organisms from outside to invade the uterine cavity. Additionally, the device alters the intrauterine milieu, making it more conducive for the growth of certain microorganisms.

Actinomyces are a group of higher bacteria—these are not fungi—which normally do not occur in the female genital tract. These organisms, however, are commonly found in the oral cavity and in the intestinal tract. In the genital tract of women, actinomyces appear to be acquired by oral genital sex.

Until about 5 years ago, actinomyces infection of the female genital tract had been rare. Less than 200 cases have been recorded in the world literature. This infrequent documentation of actinomyces infection probably resulted from the rather nonspecific clinical signs and symptoms of these patients and, more obviously, due to the lack of any reliable and cheap diagnostic procedure.

In the year 1976, we at Hopkins observed the occurrence of actinomyces organisms among women using IUD's for contraceptive methods. These organisms occurred as dark, irregular masses composed of thin, branching filaments which can be correctly identified in routine cervicovaginal smears or "Pap tests." Some experience in evaluation and correct interpretation of Pap smears is helpful in increasing the specificity and sensitivity of this diagnosis.

Since the original observation, we have investigated over 100,000 women attending Johns Hopkins Hospital. At Hopkins, in nearly 10 percent of the adult female population employing IUD's, actino-

myces organisms have been observed in Pap smears. No data about the incidence of actinomyces among IUD users is available.

Depending upon the training, experience, the techniques employed, and the socioeconomic and geographic origin of the women studied, prevalence of actinomyces organisms among IUD users has been reported between 2 and 25 percent. There is one report saying that about 90 percent of the women using IUD's have actinomyces. I beg to disagree with that report.

Senator DENTON. Sir, if you will permit me, I am slightly confused with this part of your testimony. You say at Hopkins, where you have investigated 100,000 women, in 10 percent of the adult female population employing an IUD you found these organisms in the Pap smears. And you go on later with a good deal of information about these findings and infections.

But what do you mean by the sentence, "No data about the incidence of"—how do you pronounce it?

Dr. GUPTA. Right, Senator.

Senator DENTON. You say no data is available.

Dr. GUPTA. Right. I am trying to differentiate scientifically between prevalence and incidence.

Senator DENTON. Between prevalence and incidence?

Dr. GUPTA. Right. If I take this population sitting here, I may find two cases of lung cancer. That will be prevalence in this group.

Senator DENTON. Yes.

Dr. GUPTA. If I start them smoking today and follow them for the next 50 years, I may find out how many of them will develop lung cancer. That will be the incidence.

Senator DENTON. All right, sir, I understand. So, you have data on prevalence, but not on incidence?

Dr. GUPTA. That is correct, sir.

Senator DENTON. OK.

Dr. GUPTA. These organisms have been found to occur only in the presence of a foreign body in the female genital tract, almost always an IUD. We have seen it without IUD's, but always with a foreign body. Infection can persist for a few weeks—even after the removal of the IUD. Actinomyces have been observed with all available types of IUD's.

Some investigators have reported a protective effect of the copper IUD. This does not appear to be so. Organisms can be observed as early as 6 weeks after insertion of an IUD, though their prevalence increases with continual use of an IUD.

Nearly 25 percent of women using an IUD and having some local symptoms, like vaginal discharge, heaviness, intermenstrual spotting, cramps, pain, and prolonged and/or heavy periods, have been found to have actinomyces detectable in their vaginal smears. It is relevant to note that these local symptoms have been generally considered innocuous and a common accompaniment of IUD usage.

Nearly 50 percent of women using IUD's and attending this hospital for pelvic inflammatory disease, or PID, requiring surgical intervention have been found to harbor these organisms. Of the IUD users admitted for PID, actinomyces were observed in 37 and 40 percent of these cases in Arizona and Vermont, respectively.

In St. Paul, Minn., 66 percent of women admitted with IUD-related complaints were found to have pelvic inflammatory disease.

Definition and diagnostic criteria for PID are imprecise presently. It is estimated that nearly 187,000 women using IUD's develop PID every year. Nearly 20 to 25 percent, or 46,000 of these women, develop tubal infections and they probably become infertile.

PID in the presence of actinomyces is always more serious clinically, requiring extended hospitalization and treatment. During the last 4 years, incidence of IUD-related PID has increased from 4 to 20 percent, and, if I may correct Dr. Hofmann, this has been due to nongonococcal PID. The incidence of gonococcal infection, indeed, in relation to PID has gone down with the use of IUD's, but the nongonococcal, probably due to actinomyces and other things, has gone up.

PID is at least three to four times more common among women using IUD's. The risk of PID is considerably more among young nullipara women who have had more than one sexual partner or who have had PID before. The risk among such nullipara women is estimated to be 7 to 12 times greater than the general female population.

Tubal inflammation of some degree has been observed in over 54 percent of women using IUD's. Exact figures for developing PID among these cases presently are not available. This inflammation is highest, with Dalkon Shield being about 63 percent, but with lippes' loop it is about 40 percent.

PID is most common within 6 to 8 weeks after insertion of the IUD, and also after nearly 2 years of its continuous use. In a study in the Netherlands in schoolgirls between 13 and 20 years of age, nearly 50 percent of the IUD's were still in use after 2 years of insertion; 25 percent were removed because of PID.

Improper diagnosis and inadequate treatment of these women with PID can result in rare but serious complications. Dissemination of actinomyces infection to other parts of the body and deaths have been reported.

Senator DENTON. Sir, let me see if I have that right. You say in Sweden——

Dr. GUPTA. That should be the Netherlands, sir.

Senator DENTON. Sir?

Dr. GUPTA. That is not in Sweden; that was in the Netherlands.

Senator DENTON. I thought that is what you said.

Dr. GUPTA. Right.

Senator DENTON. In a study in the Netherlands in schoolgirls between 13 and 20, nearly 50 percent of the IUD's were still in use after 2 years of insertion. But 25 percent were removed because of PID?

Dr. GUPTA. Right.

Senator DENTON. That leaves 25 percent or close to it?

Dr. GUPTA. Right. They were removed either because of expulsion or accompanying pregnancy or heavy menses or some cramps. The girl could not tolerate it.

Senator DENTON. So, with the one cause of PID alone, 25 percent of 100 percent had been removed?

Dr. GUPTA. Right, sir.

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Improper diagnosis or inadequate treatment of these women with PID can result in rare but serious complications. Dissemination of actinomyces infection to other parts of the body and deaths have been reported. Most commonly, however, the infection causes damage to the fallopian tubes, ovaries, the uterine cavity, and the adjoining bladder and the rectum.

Nearly 850,000 cases of PID occur in the United States every year. At the most conservative estimates, it can be calculated that IUD's are responsible for 187,000 cases of PID annually. Total medical cost of these cases is estimated to be $75 million per year. The total cost, according to studies from CDC, for all PID in this country is over $2 billion a year.

At least 25 percent of these cases are associated with actinomyces which can be picked up on Pap smears. Also, based upon the published information, 25 percent of these women with PID will become infertile as a result of tubal inflammation and infection.

Exact management of women found to have actinomyces in their Pap smears is controversial. In most asymptomatic women found to have actinomyces, removal of the IUD is generally considered adequate, although the National Medical Committee of the Planned Parenthood Federation recommended prophylactic use of antibiotics in all women found to have actinomyces. In women having local or general symptoms, antibiotics should be used after diagnosis of actinomyces is established.

Because of increasing risk of infertility, IUD is not recommended as a mode of contraception, especially among nullipara or women who plan to have more children. In a French study published in 1980, the only absolute contraindication for the use of IUD's is nulliparity.

Senator DENTON. Is what?

Dr. GUPTA. Is a nulliparous woman; that is an absolute contraindication.

The magnitude of the IUD and actinomyces problem, its nature and sequelae are not known. Incidence of infection, long-term effects and socioeconomic implications need to be investigated. Obviously, there is no final answer to the prevention and management of these cases.

Use of IUD's among nullipara women with resultant tubal scaring and temporary or permanent sterility problems and its cost to the society and the Nation need to be studied. I believe the problems of ectopic pregnancies and lost and expelled IUD's are perhaps only indirectly related to this infection.

The price of contraception, especially IUD, is a question that needs to be answered. Thank you.

Senator DENTON. Thank you very much, Dr. Gupta. Miss Chamberlain?

Miss CHAMBERLAIN. Thank you for the invitation——

Senator DENTON. Would you lower those mikes please, Miss Chamberlain, so we can hear you?

Miss CHAMBERLAIN. Thank you for the invitation to discuss some of the programs concerned with adolescents. The programs that will be described took place in Georgia and in Washington, D.C. We are presently working with infant mortality in the District of Columbia for the Commission of Public Health.

All of the flowers of all the tomorrows are found in the seeds of today. The hearing on health aspects of adolescent sexual activity has particular relevance to this adage. The focus of our program has been to show how lifestyle and health style are connected, and how the quality and quantity of one's life can be affected.

Senator DENTON. Lifestyle and health style are connected, and what else? I missed the rest of that, and I will ask you to speak up or place the microphones closer to your mouth because I value your testimony.

Miss CHAMBERLAIN. And how the quality and quantity of life are affected.

The multiple, multifaceted problem of early child-bearing requires a multiple, multifaceted approach for effective prevention or reduction. We shall describe one way that we have launched prevention programs for tomorrow's flowers with success.

The magnitude of the problem of adolescent child-bearing, 600,000 adolescent mothers a year in the United States, demands that we provide opportunities for maximal growth for those who are most at risk. Health maintenance habits, continuation of schooling, skill acquisition, life planning, and the expansion of creative talents aimed at increased self-esteem—these things comprise our approach.

The holistic model plays a significant role in addressing the adolescent problem. The methods used have been related to the basic needs as follows: One, to use existing health facilities as a means of lessening dependency and increasing self-management; two, practice in decisionmaking and giving service to others as a means of increasing self esteem; three, participation in activities that encompass the spiritual, mental and emotional, as well as the physical aspects of life; provision of opportunities to overcome the deficits in health knowledge, as well as the inexperience of the adolescent in problem-solving through group role play simulation and actually planning and executing community programs; rehearsal of coping skills to deal with identity crises, academic pressures, and interpersonal communication barriers.

The adolescent target population–and I am only speaking today about the adolescent portion of the program. The total program included families, churches, schools, out-of-school youth, et cetera.

The adolescent target population of approximately 200 boys and girls in three predominately urban locations—youngsters ranging in age from 9 to 18 were included. The average age was about 11, and the average income of the family was $6,000 or less, and an average grade level was 6.5.

Our experience with youth who are considered high risk revealed the following characteristics. They had had limited experiences. Some who lived within a 10-block radius of a major university complex had never been on campus. The participants had not attended a concert or play, except at school. They belonged to no club or organized group. The participants had had no experience in a leadership role or in a star role.

Participants could identify only eight possible careers or occupations, and the six consistently named were those with whom they had had some contact—ministers, teachers, nurses, social workers, school counselors, and physicians.

Now, the positive attributes of this high-risk group included an absolute eagerness to talk, as they said, "Nobody listens to us; they just either tell you something or they ask you a lot of stuff."

Two, an excitement at learning that they could learn new things rapidly and that they were learning things that their peers and significant adults in their lives did not know. They had a desire to practice each new skill that was taught, and used their training in independent transportation to take others to art galleries and museums that had been introduced to them.

They showed great appreciation for being treated with respect, which did not include on our part trying to be a pal or to be one of their peer group. At all times, our role models were required to maintain both a dress and speech standard.

Senator DENTON. To maintain what?

Miss CHAMBERLAIN. A dress and speech standard. No one who worked with us, with the adolescents, was allowed to wear jeans and T-shirts and to, so-called, speak street language in an attempt to make a relationship. They already had had those examples; we did not need to do that.

Some of our principles are in agreement with the Furstenburg 6-year study, in which he compared 400 adolescent mothers with others who did not become parents, and he found the at-risk population to have these features: early and frequent dating; a belief that "everybody is doing it;" and, three, a belief that one would not get caught. We found those same beliefs.

Unplanned pregnancies for adolescents, whether married or not, usually end with the mother having the sole responsibility for the child. Young people who stay in school or who have returned to school are more likely to defer child-bearing to a more appropriate age.

One-half to one-third of all female dropouts cite pregnancy and/or marriage as the principal reason. The unemployment rate for dropouts is 50 percent higher than for high school graduates.

Priority must be given to educational and life planning in developing a preventive approach that focuses on the building of self esteem through specific skill-building and experience. It is of little use to tell the youngster, "Feel wonderful about yourself; you are really terrific," when the youngster cannot list two interests, cannot list any hobbies, has trouble in reading and spelling, and has never received applause for anything. It is important to have something one is proud of. So, we believe that skill training is a part of building self-esteem.

Career directions must be made available on a continuing basis because all life planning is subject to change, to compromise and to renegotiation. One's initial career decision does not stand as a permanent and irreversible act.

As part of our preventive approach, introduction of all the participants to appropriate supportive local agencies already in place was emphasized, for adolescent child-bearing is not a short-term problem confined to adolescent years. The deficit in the quality of life increases in proportion to the advance of technology. The young adult period of early child-bearers adds another deficit as the years go by—the inability to give their children a maximal start toward competing in an ever-increasingly complex world.

The most salient features of our program were the provision of role models who looked like the youngsters with whom we were working and who were perceived as high status by the youth. These role models interacted in information-giving and in role simulation that used actual life experiences, encouraging activities which reinforced the career information.

As an example, when we discovered that the young people's knowledge of careers was limited to six vocations, we designed an exercise to correct and expand their horizons. Each person was told, "You are to ask every single person working certain questions. You have to do three a day for a certain length of time, whether it is the minister or a waitress or a postman."

The questions were, "How did you get this job?" "What did you have to do first?" "Do you like it?" "Did you learn how to do this on the job?" "When you were my age, what kind of job did you want," for many of our youngsters had not been in contact with a large number of working people whom they could use as a role model for life planning.

So, specific dialogs were written to demonstrate how to overcome specific barriers and obstacles, how to seek sources of help, and how to serve as an advocate. Our followup data to date has shown that the youth who participated, for example, in the Georgia Communiversity Plan, have increased their use of community and human resources, have continued in school, have maintained their belief in themselves, and have to date successfully avoided the early entry into parenthood that destroys their chance for use of their potential and often burdens them with disabled or high-risk dependents whom they are ill-equipped to help.

We do not claim that this is the answer to the problem of early child-bearing. We do sincerely believe that strong, preventive-oriented, holistic approaches have met with some success and are therefore worthy of serious consideration.

In closing, Dr. Furstenburg's quote sums up our feelings concerning the adolescent's present dilemma. He states:

> Early parenthood destroys the prospect of a successful economic and family career, not because most young parents are determined to deviate from accepted avenues of success or because they are indifferent to or unaware of the costs of early parenthood. The principal reason that so many young mothers encounter problems is that they lack the resources to repair the damage done by a poorly timed birth.

All of the flowers of all our tomorrows are indeed found in the seeds of today. They are worthy of our combined efforts to help prepare the soil and environment in which they are to grow, and to water it with skills that lead to self-esteem so that they may bloom as mature, responsive and responsible adults who contribute to and participate in a rich, full, quality life. Thank you.

Senator DENTON. Thank you, Miss Chamberlain. Dr. Short? After Dr. Short's opening statement, we will have questions for the panel.

Dr. SHORT. Senator, I am not sure I belong here. I am not a medical doctor. I have no evidence one way or the other whether the IUD or the pill is safe or unsafe. I am primarily concerned as a sociologist with the social, psychological and emotional well-being of youth, and the effect on their health.

Senator DENTON. I guess psychological and emotional well-being have something to do with health.

Dr. SHORT. I hope so; psychosomatic medicine seems to indicate so.

My concern and my research seems to indicate that the two greatest concerns of young people in the whole area of marriage and family—which is, of course, the area of my life's work—is, one, how can I really know when I have found the kind of love that will support a happy and permanent marriage? And that is the basis of my book, "Sex, Love or Infatuation: How Can I Really Know," which modestly, I might say, has been a bestseller for 4 years for Augsburg Press.

And I think the reason for that demand is that young people really want to know that answer. Nine-and-a-half out of every ten of them will marry at least once in their lifetime, but 33 percent of their first marriages will end in divorce; another 3 percent in separation—the poor man's divorce—and another 15 to 20 percent will stay together—because of religion or children, or they are too chicken to get a divorce, or something else—but they do not like it very much. And they want to avoid that kind of result for their own marriages.

The second most commonly asked question is most directly related to this hearing, and that is: How do I cope with my sexuality before marriage? They are marrying later and later. The average female now marries at slightly over age 20, and the average male at slightly under age 23.

Yet, they are getting able to perform sexually earlier and earlier, and unfortunately the public media tends to encourage them to do it. The soap operas count it a lost cause if there are not at least a half dozen cases of adultery every week, I think.

My concern, then, has been to help young people understand that this is a decision they are going to have to make for themselves. They are going to have to decide what to do about their sexuality. And I am sorry, Dr. Hillabrand; I have to say that when they are in the back seat of a car breathing hard, you and I cannot help them. They are going to have to decide for themselves what they do.

So, my approach has been scientific. When they ask about it, they usually say, "Professor Short, what do you think about premarital sex?" Frankly, I do not think this generation gives two hoots about what Professor Short thinks about premarital sex, or what any of us think. The important thing is what they think.

So, I would simply walk to the board, draw a line down the middle, and say, "You give me all the arguments you can think of in favor of premarital sex," and we will get them all down, and go to the other side of the board—"all the arguments you can think of or have ever heard against it."

Over the years, I have gathered a list of all the arguments, pro and con, that they can think of. They have not been able to come up with any new arguments in the last 5 years; it is a pretty complete list.

[The list referred to follows:]

CHECKLIST OF ARGUMENTS FOR AND AGAINST PRE-MARITAL SEXUAL INTERCOURSE

General Information: Date_____ 19___
CLASS: Fr__; So__; Jr__; Sr__; Other_____
Your age____; Sex___; Religion_____
STATUS: Single___; Married___; Divorced__

Confidential Identification Code:
Last letter of your mother's maiden name___
Last letter of your father's middle name___
Last letter of your birthplace (town)_____

Rev. 8/80

WHEN GROUPS OF STUDENTS at the University of Dubuque, Iowa, and the University of Wisconsin-Platteville, were asked to list all the arguments they could think of both for and against pre-marital sexual intercourse, the following lists were formulated:

A. Arguments Offered For: Indicate for each item the degree of soundness or unsoundness which, in your judgment, that argument for pre-marital coitus really merits.

		A Very Sound	B Fairly Sound	C Undecided	D Fairly Unsound	E Very Unsound
1.	It is the highest expression of human love.					
2.	It is the natural sex expression.					
3.	It avoids frustrations aroused by petting.					
4.	It is a maturing experience.					
5.	A student cannot afford marriage.					
6.	Rebellion of student whose parents will not allow marriage.					
7.	It is a way to rebel against society.					
8.	It avoids responsibilities of marriage.					
9.	It is a method of getting a mate.					
10.	It brings pleasure, enjoyment, fulfillment.					
11.	It seems increasingly more socially acceptable.					
12.	It is condoned by other modern cultures.					
13.	It satisfies curiosity.					
14.	It is a test of physical compatibility.					
15.	It is a test of mental compatibility.					
16.	It fills a need for affection (loneliness).					
17.	Why wait; the world may blow up tomorrow.					
18.	It's O.K. if you don't get discovered.					
19.	It can be used as an escape mechanism.					
20.	Some people have had experience living in a culture where pre-marital coitus was acceptable.					
21.	O.K. if done for fear of losing desired mate.					
22.	Prohibitions inhibit expression of real love.					
23.	O.K. if couple is engaged, plan marriage.					
24.	O.K. if couple consider selves married already.					
25.	Sexually experienced persons adjust more quickly to sex in marriage.					
26.	_____					
27.	_____					
	TOTALS.....					

B. Arguments Offered Against: Indicate for each item the degree of soundness or unsoundness which, in your judgment, that argument against pre-marital coitus merits.

		A Very Sound	B Fairly Sound	C Undecided	D Fairly Unsound	E Very Unsound
1.	The fear and danger of pregnancy.					
2.	The danger of venereal disease.					
3.	It causes guilt feelings.					
4.	Brings social disapproval, pressure, penalties.					
5.	The fear of being discovered.					
	SUB-TOTALS.....					

	A Very Sound	B Fairly Sound	C Undecided	D Fairly Unsound	E Very Unsound
6. Violates religious beliefs.					
7. A stigma is on the unwed mother and child.					
8. Pregnancy is especially a problem if one is unable to accept marriage responsibilities.					
9. May be forced to marry before it is wise.					
10. It interrupts normal life patterns.					
11. Its social effect on, and threat to, the family as an institution.					
12. Tends to prolong unsound relationships (infatuation) which normally would die except for the sex stimulation.					
13. May lead to mental conflicts; in extreme cases, even mental illness or suicide.					
14. Not likely to be as thrilling as anticipated due to abnormal conditions, fears, guilts.					
15. Violates the ideal of not breaking sexual chastity before marriage.					
16. If you love your partner, you won't wish to expose them to probable negative consequences.					
17. Abortions are dangerous, immoral, traumatic.					
18. Tends to lead into crime or prostitution.					
19. It tends to break-up the couple before marriage.					
20. Leads to doubts that partner can be trusted.					
21. It may lead to a pattern of fear, guilt connected with the sex act, even lasting into marriage.					
22. It may impair the aesthetic (beautiful) aspect of sex in marriage.					
23. Poor conditions for coitus usually prevail.					
24. Tends to spoil relationship if pregnancy results.					
25. If a child comes, it will likely be unwanted, and children need to be wanted.					
26. Tends to lead to extra-marital relations.					
27. Causes loss of respect for self and sex partner.					
28. Cheapens procreation, which is a sacred trust.					
29. Many persons don't want to marry someone who has had intercourse with others.					
30. Immaturity is reinforced--person wants the joy, pleasure of sex without any responsibilities.					
31. The relationship may be exploitive, selfish.					
32. Sexually experienced persons have less happy marriages.					
33. Sexually experienced persons are more likely to be divorced.					
34. Sexually experienced persons are less happy with their married sex life.					
35. _____					
36. _____					
TOTALS.....					

YOUR ANSWER: In view of the above arguments both for and against, do you think sexual intercourse before marriage is in your best judgment (check one)--

_____Very Wise _____Wise _____Undecided _____Unwise _____Very Unwise

NOTE: From Ray E. Short, Sex, Love or Infatuation: How Can I Really Know? (Minneapolis: Augsburg Publishing House, May 1978) 176 pp., 5th printing. All rights reserved.

Dr. SHORT. So, my approach has been to look upon them as adults, and to help them have the kind of information to make a sound choice for themselves.

That apparently has been fairly effective in changing their attitudes on premarital sex, even though as a scientist, I never once say to them, "Do it or do not do it; it is good or bad; you ought to or you ought not to." Instead I say, "Here are the facts; you are going to have to make up your own mind."

The resulting change in attitudes on premarital sex has been quite surprising. Last year, I talked to literally tens of thousands of young people, mostly high school, some junior high, and a number of college student groups on this subject. Before-and-after studies at two Wisconsin high schools were made. The young people took the attitude survey before I spoke to their assembly, and then again after. They were anonymous surveys, where the researcher knew what their coded before-and-after attitudes were, but nobody else knew and nobody could identify the persons paper. In one case at Fort Atkinson High School, out of 600 students, 171 changed their view in the direction of rejecting premarital sex. Of that group, 110 moved from undecided to rejection—and I never once said do it or don't do it.

The second, and even more surprising result was at Tomah High School with a little over 800 students. I had about 2½ hours with them in a gymnasium. Sixty-six percent did a turnaround in their thinking in the direction of rejecting premarital sex.

[Information supplied follows:]

12-743 O - 83 - 5

RAY SHORT is ENTERTAINING!

but is he EFFECTIVE?

YOU BE THE JUDGE . . .

Before and after Dr. Short's two-hour assembly on "Love or Infatuation," Fort Atkinson, Wis., High School measured over 600 student attitudes about PREMARITAL SEX. He never once said "you should" or "you should not" have premarital sex. STILL . . .

171 students changed their minds in the direction of disapproval of pre-marital sex

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TOMAH SENIOR HIGH SCHOOL

NEWS RELEASE - June 6

TOMAH JOURNAL AND MONITOR-HERALD

On April 10 and April 17 two seminars were held on Communicating Love, Sex and Morality. Dr. Ray Short, Professor from the University of Wisconsin-Platteville spoke to the student body at both the Junior and Senior High Schools during the day. His message was on Love or Infatuation.

Several days prior to his speaking, the over 800 senior high students were given a survey to determine their attitudes regarding sex. The same survey was given several days after Dr. Short's appearance to the senior high students.

The major question asked on the survey was: "In view of all the arguments for and against pre-marital sex, do you think sexual intercourse before is: very wise, wise, undecided, unwise, very unwise?"

The surveys have been tabulated and the results are as follows:

	Pre-survey		Post-survey		% of Change
Very Wise	11%	40%	2%	8%	32%
Wise	29%		6%		
Undecided	40%		38%		
Unwise	12%	20%	45%	54%	34%
Very Unwise	8%		9%		
			Percent who changed view		66%

The committee members are very pleased with the results which show significant changes in attitudes from before Dr. Short's presentation to after his talk.

. . . . . .

WHITEFISH BAY HIGH SCHOOL

1200 E. FAIRMOUNT AVENUE, WHITEFISH BAY, WISCONSIN 53217 Lawrence E. Grant Principal

One of the teachers surveyed some of his classes. You might be interested in the results. He developed the questions. (Good questions.)

	Yes	No
Were you embarrassed?	1	61
Was it informative? Did you really learn something?	52	10
Will this talk have a lasting effect?	49	13
Did you feel that this was adult propaganda to keep teenagers in line?	1	61
Did you like his style?	61	1
Could he have been just as effective in one hour?	9	53

BEST COPY AVAILABLE

Dr. SHORT. Senator, I think this is a great generation of young people. I think they are really a great bunch.

Senator DENTON. Sir, I cannot help but interject at this point that I agree with you 100 percent on that, and I cannot help relating a very similar ancedote to yours. I was invited to a very liberal college in 1974. I was to speak supposedly on the subject of Vietnam.

I went in uniform to speak there. I was advised by the young lady bringing me to the auditorium that it would be unwise to wear my uniform because the last time anyone had worn a uniform was several months ago and he had been stoned and tomatoed off the stage.

I went ahead and wore the uniform, and I talked about Vietnam and I talked about sex and I talked about dope. And I was told that a great number of the kids—more than 50 percent—were living together in the dorms; most of them were on pot or more.

When it came time for me to quit, after 45 minutes of talking and 45 minutes of questions and answers, a young man who happens to be a son of one of the Supreme Court Justices stood up and said, "Well, thank you, Admiral," and indicated it was time to break up. I started speaking at 8 o'clock. That was at 9:30.

Those kids did not let me out of there until after 1 in the morning, and not one of them left. I did not lose any of them; I did not have any enemies in that crowd. So, I agree with you. Those kids are more perceptive than they were when I was a kid, because their consciences are being challenged and abrased more than ours were when we were kids, and they are rising to that occasion.

I also think, Senator, that some of them are not comfortable with the cheap, sleazy, purely physical conception of sex they are getting on the TV every night and in movies.

You might be interested to know how this turnaround in thinking about premarital sex occurred, when no recommendation was made one way or the other. In my book, "Sex, Love, or Infatuation" I have compiled as a result of my research what I call nine known facts—relationships between having premarital sex in one's background and one's possibility or probability of marrying and having a happy and permanent marriage, which I know they are interested in since almost all of them will marry at least once in their lifetime.

Senator DENTON. That is the key thing; that was what I got them with. All they want is love, and they want it more or less permanent. They want the security of that, and they know this other route, this so-called new morality, is just about as new as Adam and Eve and is just about as permanent as the evaporation of a raindrop.

Dr. SHORT. In any case, the first known fact is this. Two groups of young people were analyzed. One group of young people did get involved in having premarital sexual intercourse with each other and the other group did not. Those that did get involved in sexual intercourse, it was discovered, were far more likely to break up before marrying than those who did not, which tends to refute the common conception a lot of girls have that if they do not give in, he will cut out. If she does not give in and he cuts out, maybe she is lucky.

But if she really wants to keep him, if she gives in he is less likely to cut out than if she holds out.

The second known fact: Those who have had premarital sex of any kind in their background reported they were less happy in their marriages than those who had remained virgin until they married.

Third known fact: You would expect from the second—those who have had premarital sex are considerably more likely to be divorced or separated than those who have not. Obviously, if they are less happy, they are more likely to be divorced or separated.

Fourth known fact: While a lot of young males in our society do everything they can to reduce the number of virgins in the population, when it comes time to marry, 55 percent of the most marriageable aged males in America—those between 20 and 25—prefer to marry a girl who has not been pawed over by anybody else. And if she wants to marry an outstanding young man, one who is outstanding enough to make "Who's Who in American High Schools", in a survey in 1979, just 3 years ago, 63 percent of that group preferred to marry a virgin. That's almost two out of three.

You recognize the double standard; what the guy is saying is, "It is all right for me to have sex with the girl you marry, old buddy; it is not all right for you to have sex with the girl I marry."

The fifth known fact may be more important than the other four put together in terms of the future and importance of the family. Those who have had premarital sex are considerably more likely to have extra-marital sex—that is, commit adultery—after marriage.

And I tell the young men, "Fellows, if you think a lot of her and think you might like to marry her someday, you might want to keep this in mind. The girls in America who have had premarital sex are a little more than twice as likely to cheat on their husbands after marriage than those who remain virgin until marriage."

The reason this is so important is that the one thing that very few marriages in America can survive is adultery on the part of one partner if the other partner knows about it. That almost always breaks up a marriage. If it does not break it up, it drives a deep wedge of suspicion and lack of trust in the relationship. So, that finding is very important from the standpoint of sociologists and our concern for the family.

Facts six and seven go together. Six is a temporary advantage from having premarital sex; and seven, a long-range disadvantage. Six: those who have had premarital sex report that it took them a shorter period of time to adjust to each other sexually after they got married than it took the virgins. The virgins took longer to adjust sexually.

That is understandable, I think. Sex is, in part, a physical skill, it's like riding a bicycle. Well, it is not quite like riding a bicycle, but you do not just get on a bicycle and ride off down the street at 20 miles an hour without skinning shins and falling over several times. You have to learn when to turn the wheel. You do not just sit down at a typewriter and bat off 60 words a minute without making an error.

It takes practice in any skill, so it is understandable that the more sexually skilled one is before marriage, the quicker the ad-

justment. I sometimes tease the boys and say, "Marry a prostitute if that is what you want, fellows. She has had more experience than anybody."

Senator DENTON. Did you do any looking into who was having the most fun sexually 5 or 10 years down the pike?

Dr. SHORT. Yes, that is my next point.

Seventh known fact: While those who are virgins take longer to adjust and make their mistakes together—do their bumbling and fumbling together—but once they do adjust to each other sexually, they report greater satisfaction and happiness in their sex life in marriage than those who have a great deal of experience. I think part of that is the element of comparison with previous sexual partners, particularly on the part of males because females have such widely differing reactions to the sexual intercourse encounter.

And eight is, in my judgment, the thing that accounts for more bad marriages than anything else in America today. It is what we in sociology call the test of time. There is a natural, built-in protection against getting into a lousy marriage if it is only a romantic love, so-called—and I do not dignify that by calling it love because it will only, statistically, hold a couple together 3 to 5 years even if you throw in a red-hot sex relationship. In 3 to 5 years, it is over.

Many people fool themselves into thinking they have a good overall relationship when they do not, and here is how it works. A romantic infatuation, given enough time, does not have the ingredients to hold the relationship together and it will falter and fall; it will wither and die in a matter of weeks or, at most, months—thus saving the person from getting into a lousy marriage.

If it is a good relationship, it will last not just weeks and months, but many years—maybe a lifetime. Now, this is a built-in, natural protection—this test of time—unless in the process of the relationship the couple involves themselves in a mutually satisfying sex relationship. And if that happens, all bets are off on the test of time because a sex relationship that is mutually satisfying may hold a couple together, statistically, up to 3 to 5 years. It will not hold it together any longer than that, but it may hold it together that long.

I am now saying to my students, no one should enter the high privilege of marriage these days, in view of those 50–50 odds that they will make a mistake, without at least a 2-year period of courtship and engagement. I think anything less is spitting in the tiger's face. They are skating on thin ice; they will probably fall through.

Here is a couple that gets involved sexually; it is mutually satisfying. They say to themselves, "Well, old Professor Short says 2 years. We have been going at it 2½; it must be the real thing." They go to the altar; they say their vows. A year or two down the pike, they have tragedy, they have heartache. It goes on the rocks; they have a divorce and they wonder what happened.

Well, what happened was this. They assumed it was passing the test of time, since if a relationship lasts that long it would ordinarily prove that the couple was being held together by a good, total, overall relationship. What actually was happening was that they were coming back to a good sex relationship with each other. That fooled them into thinking they had the stuff of a good marriage, when it was largely sex that held them together.

In my judgment, I tell them if there were no other argument against premarital sex than that one, that would be enough. It has nothing to do with morality, nothing to do with religion, and nothing to do with social approval or disapproval. If for example there were no danger of pregnancy. But, of course, there is. One out of three teenage girls that get sexually active gets pregnant outside of marriage. One out of two teenage girls who stand at the altar to be married is already carrying a baby in her body. One out of five teenage girls who gets sexually active take little or no precaution against getting pregnant at all. In fact, one out of five of those who get pregnant outside of marriage get pregnant within the first month after they start having sex. They do not even get to enjoy it very much before the boom gets lowered.

While—and here I disagree with some of the panel members—while I think most of us scientists agree that there are now four reasonably safe and effective methods of preventing pregnancy—what I call the favored four in the book—each of them between 90 and 97.5 percent effective in common practice, no one of them is 100 percent. We do not have a 100-percent contraceptive yet, but someday we will, I think. So, just the fear of pregnancy is not going to keep people from having sex.

If there were no danger of getting venereal disease, but there is. As we have heard from other panel members, it is at epidemic proportions in America today and growing worse. Two kinds, we can do nothing about. Herpes II has been mentioned. The other one is an Asian strain of gonorrhea. It does not respond to penicillin; it does not respond to wonder drugs. They get it and they just have to take it, and it is not very nice; neither of them is. But if there were no danger of venereal disease.

If there were no social disapproval of their having premarital sex, but there is. Their generation is much more tolerant of premarital sex than their parents' generation. But as of now, society as a whole does not accept premarital sex.

Their parents, virtually without exception, oppose their having premarital sex, especially their daughters. Of course, there again is that unfair, unfortunate, unjust double standard. But, of course, we know why parents are more concerned about their daughters than they are their sons.

Senator DENTON. A lot of pencils got busy, Dr. Short, when you said society does not approve of premarital sex. I imagine that there are many polls which will say that people polled with the question, "Would you categorically disapprove of premarital sex," might say no, in that they mean that the person should not be put in jail or something like that.

If the question were asked another way, "Do you think it would be advisable that our society, in terms of its mores, try to have standards which motivate one to try to withhold to the maximum degree possible the full indulgence of their sexual appetites until marriage," I think that question would confirm that most of our society would be against premarital sex. It depends on how the question is worded.

Dr. SHORT. Well, this may change as these young people become parents themselves. I would be very interested, and I hope I live long enough to find out whether their views change; whether pre-

marital sex will be as acceptable to them for their daughters as they want it to be for themselves. I will be interested in that. I do not know how it is going to turn out; I do not think anybody does. But, as of now, society does not approve.

Virtually every study indicates that virtually without exception, parents oppose their kids having premarital sex, particularly their daughters. Of course, the reason is they are afraid she will bring home a package they did not order from Sears Roebuck.

I tell my students at the university I am against the double standard personally, Senator; I want to make that clear. But I am afraid they are going to have to go on putting up with a certain amount of that until we find some way for men to have babies, and that may take us a while.

Finally, every major religion in America condemns premarital sex. I do not know of any exception in either Catholicism or Protestantism in Christianity or Judaism. Every major religion condemns premarital sex.

But if none of these were in the picture. No condemnation of premarital sex by their religion and parents, no danger of VD, no danger of getting pregnant. In my judgment, this one factor, the fact that they are robbing themselves of the best natural protection against getting into a lousy marriage is more than enough reason why a person would want to think a long time before getting into a mutually satisfying sexual relationship. It causes them to flunk the test of time if they get involved sexually, they will fool themselves into thinking they have a better relationship than they do, and they make a big mistake.

The final one, in my judgment, now accounts for more sexual maladjustment after marriage these days, I think, than anything else in America It used to be caused mostly by ignorance and lack of consideration on the part of the male; prudery and lack of knowledge and lack of understanding on the part of the female. I think we are pretty much over that hump.

Now, it has been replaced by a concept which I call sexual salivation. I call it that because I am sure everybody is familiar with the Russian scientist, Pavlov, and his pooch. He set up the dog in the laboratory and showed the dog food. Every time the dog saw food, he salivated. Every time that happened, Pavlov rang a bell over the dog's head; this happened over and over again, over and over again. Then he took the food away; no need for the dog to salivate; no food. He rang the bell over the dog's head, and what did the dog do? He salivated all over the place.

Now, translate that to premarital sex, and here is how I think it ruins a lot of the early stages of sexual adjustment of newly married couples. Here is a couple that gets involved in a premarital sexual relationship. Let us put the best possible face on the illustration. Let us say that neither of them have had sex with anybody else before having sex with each other. That may be kind of a broad statement and maybe unexpected these days, but let us say it is true.

Let us say they go ahead and marry each other; they go ahead and make it legal. Somehow, in America it is not thought quite as bad if they do. Let us say that they do not get a pregnancy, they do not get venereal disease, they do not get discovered; none of these

negatives happen. Will they experience sexual salivation? I think they will.

Probably every time they have premarital sex in America in virtually all cases they will have three negative feelings. This will be particularly true of females because unfortunately we come down so much harder on the females in their sexual expectations than males, so every time they have premarital sex, they are probably going to experience, first, guilt feelings because they know their society, particularly their parents and their religion, is against it. They have sex, they have guilt—sometimes, a real guilt trip, counselors tell me.

Senator DENTON. But the polls and many of the so-called findings always report that only *x* percent, like 25 percent of the teenagers report guilt feelings, as distinct from feeling it.

Dr. SHORT. I think many of them are going to not report it, but many of them are going to feel, maybe not even consciously. But I think, subconsciously, there is going to be real guilt out there. I doubt if there are many females in America that have premarital sex without feeling guilty.

The second thing they are going to experience is fear—fear of two kinds; one, a fear of pregnancy, a very real fear, as I pointed out; second, a fear of being discovered. They are afraid mom or dad will come home unexpectedly. By the way, the first instance of intercourse for teenagers that get involved sexually occurs in the home of either the boy or the girl, not in the back seat of a car. As more and more mothers and fathers are both working, there is a gap of 1 hour or 2 between the time school is out and the time work is over, and I guess I do not have to draw a picture.

But if they are doing it in the back seat of a car, they are afraid somebody will come around in lover's lane looking into the back seats of cars with a long flashlight. I understand it is very exciting.

So there is a fear of discovery, a very real one. If she is a couple of days late having her menstrual period, it probably scares the liver out of them. They may even swear off for 1 week or 2, and then one kiss leads to another and they are probably back in bed.

The third thing they are going to experience every time they have premarital sex—not just guilt, not just fear, but loss of self-esteem. Right or wrong, we have been taught since we were so high that nice girls do not, and neither do nice boys, and there is a loss of self-esteem if you do.

Now if none of those were in the picture, then I think sexual salivation is still going to operate. They have sex, let us say, three times a week. The national average is four times a week in the teens and twenties, three times a week in the thirties, twice or less after 40. After 30, it is all downhill.

So they have sex three times a week. Every time they have sex, they experience guilt, fear, and loss of self-esteem. This happens three times a week, week after week, month after month. Then they get married. Now, society says, "You have got the piece of paper; it is all right. We do not care whether you have sex; we do not care how you have sex. You can stand on your head and do it if you want to; we do not care."

Question: Does that mean that just because they have got the certificate, they can just fall into bed with each other on the night

of the ceremony and release themselves fully and freely to each other without any longer experiencing any guilt or fear or loss of self-esteem? I think not.

I have a case which I cite in Sex, Love, or Infatuation from my own counseling records—a couple who had been married for 10 years. She had four children. She had never had sex with anyone before getting involved with her husband in an 18-month premarital sexual relationship. They did not get caught, they did not get a pregnancy, they did not get venereal disease; none of these happened. They were not dummies either; both of them were college graduates.

But 10 years and four children after the marriage, that woman was still in some measure experiencing what we used to call frigidity in women—inability to release herself fully and freely to her husband in the sexual encounter.

I tell young people, those are the facts. "Do not ask me whether you should or whether you should not. It is not up to a scientist to try to tell you what to do. Our job is to give you facts. But at least you ought to consider those nine known facts." Apparently, it is getting done. It leads to a lot of rethinking of attitudes toward premarital sex.

Finally, Senator, I want to close by saying that I suggest two main reasons why I think so many of our young people are involving themselves in irresponsible sexual behavior. One is the public media and the movies. If they are bombarded with vivid examples of unmarried near-strangers climbing into bed, they just come to assume that it is the only way to go.

Senator DENTON. Or with the corollary that there is no fun in married sex. It is all outside; that is where the fun is.

Dr. SHORT. Yes; or that sex is the most important thing in marriage, and that is a big, fat mistake, too.

The second reason is perhaps less obvious but of equal influence. Dr. George Wald, Nobel laureate from Harvard, has called this the generation in search of a future. They have never known one moment of their lives, Senator, where they were not under the constant day-to-day threat of being annihilated by nuclear holocaust. This younger generation has never known a moment of their lives without that.

When asked whether as a biologist Dr. Wald thought our astronauts would ever find intelligent life on other planets, he smiled and replied that his main concern was not whether we would find intelligent life on other planets. His concern was whether when our astronauts returned to this planet, they would find intelligent life here.

Little wonder that our young people so often opt for immediate thrills rather than long-term values. "If I do not have sex now, I may never get to know what it feels like," they say to themselves, and I can understand that. If we are to curb irresponsible sex, we will have to put a stop to this insane nuclear arms race and provide enough responsible world law so that nations must settle their differences through courts of law like anybody else and not through weapons of war. Thank you very much.

Senator DENTON. Thank you, Dr. Short. On that last point, I agree that that fear is an active factor in this desire to reproduce

yourself, which, in its most fundamental beginnings, is just the sexual drive fulfillment.

I would remind you, however, that back in the days of Rome and Carthage, they said in Rome for about a couple of hundred years that Carthage must be destroyed. And when they destroyed Carthage, they did in every man, woman and child and left not a stone upon a stone.

So, I admit it can happen faster and I am against it happening, but the question is how to keep it from happening.

Dr. SHORT. Right.

Senator DENTON. Well, before we go into the questions, I want to say a few words.

First, I want to delude anyone of the idea that I do not think sex is fun. It is the most fun, maybe, there is. It is an appetite by which I think our creator insured that we would procreate ourselves. I am not trying to deny it to anyone; I am trying to maximize that fun in a manner consistent with the maximization of happiness, considering the whole life of the individual who would indulge in the sex, the partner of that person, and the possible human product or products of those two persons.

That is the only reason I am into this, except for the fact that it happens to be my responsibility as chairman of this subcommittee to deal with this subject. It is not out of a feeling of omniscience or dictatorial desire to impose my morality or beliefs that I address this. I am addressing it with as much humility and objectiveness which I can dredge up from within myself, and I am just as sure that Dr. Hofmann and Fay Waddleton are as well-intended as I am, and Dr. Ratner, Dr. Gupta, or those who may disagree with them.

I would like for us to just proceed further into what appears to be a nationally important issue—you might say an internationally important issue; indeed, an issue of importance with respect to the continuation of civilization as we know it.

It seems striking to me that there are no more Senators here this morning in view of the fact that both sides agree that it is a tragic situation we are addressing. The reason they are not here is that in Washington, D.C., the most frequently quoted publications deal with this subject in a way which makes it somewhat hazardous to assume the role which I must assume as a matter of duty.

For example, "The Ear," which everyone reads in Washington, D.C., and is in the Washington Post, quotes Forum magazine, which magazine's perspective on sexual behavior does not correspond with most of those on the panel. It does not correspond with mine in terms of a definition of trying to find happiness.

That column is frequently quoted; it is read by everyone here in Washington. So, we have a little bit different environment on this subject than you do out there on Main Street.

I am not trying to knock anybody's imperfections. Mary Magdalene had a rather exciting life and then squared herself away. A number of young men in history have been the same way. I do not think virginity is an easy thing to maintain. I do not think perfection in marriage is an easy thing to maintain. I just think there is an infinite difference between trying and not trying to behave yourself sexually in terms of your own happiness and in terms of

whether or not the national survival question will be answered in a favorable way. That question is whether or not we are going to have enough families hanging in together long enough and well enough to raise their children, to raise them as responsible citizens.

That is why I was interested in this before I came here to the Senate. It is a national survival question. It is a civilization survival question, and the trend has not been, in my opinion, favorable over the past 15 years. So, I admit those predilections on my part before we start the questions.

As we start the questions, I hope you all will consider these points. I do not think we should trap ourselves into identifying the issue as one in which we are questioning only whether pregnancy or contraceptive use has more risks. That, to me, would be a false debate.

I am not saying that there are not some relevantly contained, lesser included questions in that vein. But I am saying that would be a false debate because contraceptive use does not preclude pregnancy. Many married couples I know have used every conceivable and available means of birth control, including the natural and all the unnatural methods, and have six kids.

So, it is folly to get into such an absurd debate because it has nothing to do with the issue. And then when you start considering adolescents and, as Dr. Hofmann said, if they were perfectly educated, she would have no problem—we have too many examples of girls splitting up the birth control pill in half and giving one to one girl and one to the other. The kind of education they have had from our hundreds of millions of Federal dollars has not solved the problems associated with adolescents sexual relations.

So, the education has not been perfect and will not be perfect unless we change the game, I think.

In assessing the harm to adolescents, there seems to be, regarding contraceptive use, a different set of data being referred to by respective witnesses. It seems that there may be a question as to the length of time involved in assessing what the harm might be.

In other words, those who are dealing with adolescents who come into clinics for sex education and contraceptive issuance, and so forth—they may not detect harm to those who come to them for a single treatment. But as I think Dr. Ratner pointed out and as Dr. Hillabrand was also implying, the family physician or the parents see the patient-child over a period of the lifetime of that individual, and they would have a different set of observations.

I know this is particularly relevant because we have such an inconsistent attendance to, say, the planned parenthood clinics on the part of the adolescents. That is a "problem." So, the education on sexual relations is not that consistently received. Clinics have a lot of drop-outs; they have a lot of part-time students. So, saying that you can insure, by virtue of confidentiality, a closer to perfect education is a subject I think that should be considered.

But the decision of whether or not to commit oneself to a free-sex lifestyle seems to me to be a rather key part of this discussion, one in which the question arises about the efficiency with which the always inefficient impartation of values on the part of the parents may or may not be affected by government policy.

Not all parents are good. I was going to say to Dr. Short, when he said after you have lived together for 2 or 3 years, that getting married might be like kissing your sister. But you cannot say that any more because of the incest that some pornographic magazines now say is acceptable.

Dr. SHORT. It may be kissing your sister.

Senator DENTON. Yes, that could be pretty exciting these days.

Dr. Ratner brought up an interesting point. And regarding education, Dr. Hofmann, I will have to say that having viewed a lot of the literature and some of the movies used by government grantees on this subject, I have seen many times the statement made explicitly that homosexuality, as an alternate lifestyle, has certain advantages. One, you do not get pregnant and, two, you do not get venereal disease. Dr. Ratner seems to be questioning that, and it seems to me I read an article in the Washington Post several months ago implying that they are not indeed immune from venereal disease.

Dr. HOFMANN. You do not get pregnant, but you do get venereal disease.

Senator DENTON. You do not get pregnant; I will buy that.

Dr. HOFMANN. But you do get venereal disease.

Senator DENTON You do get VD, apparently. So, we have got to take that out of those movies and out of that literature. And, again, maybe we had better take that part out here. We are going to have to discuss whether or not the young lady with the not yet regularly established cycle should take the pill, and whether or not that is just a conservative or a well-established dictum.

With that, and agreeing that television and all of these things seem to be for one reason or another presenting the sexual revolution as a fact—and I believe some of you out there would question that—in fact, Dr. Short questions whether or not there has been a sexual revolution. He says our society still has not accepted promiscuity and that we ought to try to behave ourselves.

Dr. SHORT. I did not say that. I did say that the sexual revolution, I think, is now being questioned by a lot of young people who wonder whether or not the short range is really the answer. I do think that is true.

Senator DENTON. And many parents would not like their kids to get into the sexual revolution, I guess.

Dr. SHORT. There are very few parents who approve of their adolescent kids having premarital sex.

Senator DENTON. All right. Let me ask you to answer in order and I will start from right to left here, since we did the presentations in the other order. Although neither Dr. Short nor Miss Chamberlain is a physician, I would ask them to have a shot at this question.

In view of the conflicts we have heard today regarding data, as a Government individual responsible for at least trying to influence policy, I need the answer to this question from all of you. Do we need more information on the possible health risks associated with adolescent sexual activity? If so, what kind of information do we need and how do we go about getting it?

I do not expect you, Dr. Short, or Miss Chamberlain, to be experts on that, but I do not want to pass you up.

Dr. SHORT. I think it is every bit as important to think in terms of their quality of life as their quantity of life, their psychological and sociological and emotional health as well as the physical health.

And I must say that I tell young people that, you know, it is going to have to be their decision. I cannot make it for them; you cannot make it for them; laws cannot make it for them. They are going to have to decide what they do. Unless you cut out all one-to-one dating alone, they are going to have to make that choice.

But I do tell them, frankly, in view of the nine known facts, when they ask me that, I personally do not think having premarital sex makes good sense at all. I just do not think it makes good sense. If that one factor, flunking the test of time, were the only one in the picture, that would be enough to at least cause pause and think a long, long time before being absolutely certain that their relationship is a total, overall one.

But I do tell them that if they do decide to get sexually active, for heaven's sake to use their head as well as their tail. They really ought to do everything they can to avoid bringing another little human being into the picture.

So, I think we ought to do more and more in terms of good, solid scientific evidence given to young people to counter the media. I tell young people, "Who is responsible for what is coming over the TV? Who is responsible for what is coming over in the movies?" People who are wanting to sell them soap.

Senator DENTON. Well, let us see if we cannot get hope, Dr. Short. Look at the movie that was just chosen Best Picture—I mean, there has been a turnaround there. I believe the hope of this country lies in the media; I do. I believe that the average journalist has as much or more honesty in him or her than the average guy in almost any other profession.

Dr. SHORT. Well, I agree.

Senator DENTON. And I see that the movie of the year this year out of that crazy place, Hollywood, was chosen to be "Chariots of Fire," which was not exactly a Sodom and Gomorrah-type movie.

Dr. SHORT. Well, "On Golden Pond" did not have any naked people that I saw either.

Senator DENTON. Right; a little language, I understand, but I am going to go see it.

Dr. SHORT. But what I am saying is, who is responsible for us getting what we get over the TV? Soap salesmen, people who want to sell you something. They do not give a rap whether young people who see that and go out and do the same thing get in trouble. They do not care a bit about that; they just want to sell soap.

Senator DENTON. Miss Chamberlain?

Miss CHAMBERLAIN. I do believe that we need more information about the effects and the health effects, if we consider health as being a more total kind of situation. In other words, I would certainly be interested in whether or not people who themselves have had children at an early age—we have known families where the pattern has been repeated, and one of the pieces of information that I would very much like to know and I think is in the interest of government to address is where and how can one lead a full life, and intervene without taking over another person's life for some-

thing that we know is not in their best interests, which is early childbearing.

And I also believe that the ways of getting the message out have not been sufficient for those who are not the most skilled; in other words, persons who do not read well or who do not belong to Kiwanis or belong to other groups. They have had limited access, except for the media, which we all agree is definitely not in their best interests.

So, along with seeing more of something, I think we need much better ways of getting the message out, and a brochure and a pamphlet will not do it in many communities.

Senator DENTON. Thank you, Miss Chamberlain. Dr. Gupta?

Dr. GUPTA. I agree. I think we have to separate, in my opinion, the realism from idealism.

Senator DENTON. Realism and idealism must be separated.

Dr. GUPTA. As Dr. Short said, it is nice not to have sex. That is perfect, but we do not live in a perfect society. So, we have to be a little more realistic about what we can do, and so there will be premarital sex, there will be adolescent sex whether we like it or not, and that is one fact we have to live with.

The second thing is what we can do to improve the burden on society of that sex and its consequences.

Senator DENTON. But in your first postulation, do you not think that there is something we can do to affect the relative degree of that indulgence? Do you not think that that has changed over the past 15 years by virtue of the standards which we have permitted to become the norm?

Dr. GUPTA. I think certainly there is a definite improvement, but a lot more needs to be done and there is room for improvement. And I think the education of the teenagers, whether it starts at home, whether it starts in primary, or whether it goes to high school and college, or whether it should be at the parental level or some other level, is one big field that needs to be addressed too.

The first thing will be education. Then, once we realize that that is to be approached or looked into, we can sit down and see what should be done by way of education. That is one.

The second thing is, as Dr. Short pointed out and Miss Chamberlain pointed out, the psychosomatic, socio-economic impact of the teenage pregnancies or adolescent sex need to be worked out in detail. We have no idea; we are talking about one study here, one in Finland, one in England, one in New Zealand. Nobody has done a coherent study on how it affects our morality and our kids in this society exposed to the television and McDonald's hamburgers and the back seats of cars.

That is an entirely different environment we are talking about, and that may not be entirely correct to extrapolate the observations made in Europe or in Germany or somewhere else on our kids.

So, I think there is a definite need for a local study to see what happens to these kids.

Now, coming to more direct things that can be very easily done or we can definitely help in, the guidelines for use of IUD's need to be looked into. There is a definite need, whether industry does it,

or whether we force them or you force them to do it, to improve the designs and the requirements of the use of IUD's.

There should be a definite change or restudy or rethinking about the indications and contraindications for the use of IUDs, especially in adolescents. There was a report on adolescent sexuality published in 1978, and there is a report by Searle which says, "Risks and Dangers of IUD's," and there are 18 things which are mentioned in this, including backache, leg pains, loss and gain of weight, and nervousness. These are all a part of risks and dangers of IUD's.

Also, in this same list is mentioned pelvic infection, expulsion of IUD's, secondary amenorrhea, and a lot of other things. The point I am making is there is a distinct need, and I think we can force industry to come out with more realistic, more correct recommendations and guidelines for use of IUD's, especially for the adolescents, if we are going to use them at all.

My personal feeling is a big "no." Adolescence is a contraindication for IUD's.

Senator DENTON. More data particularly on the use of IUD's, and a study and a concentration on the importance of education?

Dr. GUPTA. That is correct.

Senator DENTON. Many people say that long-range self-interest, if it is fully informed, is the same thing as morality. And I want to say this: the Washington Monthly and the Washington Post and other publications not known for being right-of-center politically, have recently come out with articles supporting very much the kind of thing that Dr. Short says.

I hate to see this as a liberal versus conservative issue. I know some conservatives who are so diabolical on this, you know, I cannot stay in the same room with them. I know some liberals who are more conservative than I in many ways on this issue. I would like to see it become a bipartisan issue. I would like to see it become something that we look at as a survival issue, an international survival issue, really.

Dr. Hillabrand?

Dr. HILLABRAND. Senator, I would like to address you as a military man. I would not have to give you a lesson to make you understand that intelligence is necessary for prevailing in battle and in wars; that battles and wars have been won by good intelligence and good communication, and the lack of it has resulted in disasters.

But at some point, somebody with a brain has got to intervene and make a judgment about how to put this information into action, which leads me to the history of planned parenthood. They have been in business over 50 years, I understand. They never had any problems in the users of contraceptives until the pill and the IUD came along. No one in this audience, I am quite sure, knows of anyone that ever died of foam, jelly, condoms, diaphragms, thermometers, or abstinence. They might go nuts, but they did not die from using these things.

However, the dangers and the risks, as Dr. Ratner pointed out—everybody who has been defending these things has been wrong. Now, we cannot afford to spend all of our time collecting intelligence and conducting espionage, and this has been the mode of the

drug cartels throughout the world, to out-perform each other in collecting information about the pill.

Dr. Ratner's little booklet down there predominately has got reports from foreign countries, and I hope the media and the drug companies will all copy and sue me when I say that this is a business enterprise; that the drug cartels of the world are collecting information and they are publishing it and putting it in the best light. And they are misleading the medical profession and the public into thinking—even Dr. Hofmann thinks that these pills are safe for children. This is the root cause of our problem in society.

We cannot any longer afford to spin our wheels. We have to intervene, take action, and begin operations, and not just collect data. We have enough information now to take action, and I hope it is not too late to save our youth that you like and that Professor Short likes.

I wanted to ask you, when you collected your data, whether there is not a difference between what people write down on a piece of paper—as you posed the question to me, what they do in the back seat is not necessarily what they do on your papers.

Dr. SHORT. Quite possible.

Senator DENTON. Do you have written, Dr. Short, some of those percentages and data about what happened before marriage and what happened after, because I would like to have them for the record?

Dr. SHORT. I will have a written statement. I finally was able to clear it so I could come, much to late to get a statement together beforehand. But I will, and virtually all of it is in the book.

Senator DENTON. We will hold the record open for 2 weeks.

[The prepared statement and additional material of Dr. Short follows:]

Testimony of

Dr. Ray E. Short, Professor of Sociology,

University of Wisconsin-Platteville

Senator Denton, Colleagues:

I am Dr. Ray E. Short, Professor of Sociology at the University of Wisconsin at Platteville and author of the Augsburg bestseller Sex, Love or Infatuation: How Can I Really Know written for youth, parents, and everyone interested in the young. I have taught Marriage and the Family courses at colleges and universities here and abroad for over 25 years, and now do lecturing halftime to tens of thousands of teen- and tween-agers and college students every year.

My concern is mainly for the social, emotional and psychological health hazards to our young people arising from their early romantic and sexual relationships. My research indicates that the two greatest concerns of youth in the whole field of marriage and the family are (1) How can I know when it's love so I can choose a mate wisely, and (2) How can I cope with my sexuality before marriage--especially as it relates to the consequences of having premarital sex. Both can have serious consequences for their health, and I will center my attention on the latter--premarital sex.

First, let me say that I think this is a really great generation of young people. They are open, intelligent and most of them want to do the right thing. They insist that we show them why certain behaviors are wise or unwise before they will act. But give them solid facts instead of moralizing and preachments and they will respond favorably in amazingly large numbers. Let me cite two examples from my own experience.

Two Wisconsin high schools recently conducted anonymous before-and-after surveys on student attitudes about premarital sex when I spoke at their school assembly. Since I am a scientist, and scientists are not in the business of

telling people what they should do, I never once told them they should or should not have sex, or that it was good or bad. I just gave them the "Nine Known Facts" from my book--facts that studies indicate are the relationship between persons having had premarital sex and their probabilities of getting married and having a happy and permanent marriage. About 95% of them will marry at least once in their lives.

The results were most surprising. Out of a bit more than 600 students, 171 changed their views during the 2-hour assembly in the direction of rejecting premarital sex. Over 1/6 of the students (110) changed from "undecided" to rejection.

At Tomah Public High School the results were even more surprising. About 66% of their studentbody of over 800 changed their thinking in the direction of rejecting premarital sex. Perhaps those nine facts which produced those results would be of interest to this body.[1]

Nine Known Facts*

Science has established nine facts concerning the probable effect of premarital sex on your marriage.

Fact 1. Premarital sex tends to break up couples. Other things being equal, couples who engage in sex are more likely to break up before marriage than those who do not.[2] So what about the young woman who gives in to sex in the hope that she won't lose her young man? She would more likely hold him if she holds out.

Fact 2. Many men do not want to marry a woman who has had intercourse

*From Ray E. Short, Sex, Love or Infatuation: How Can I Really Know? (Minneapolis: Augsburg Publishing House, 1978), pp. 83-101.

with someone else. Some fellows do their level best to reduce the number of virgins in the population. Yet when it comes time to marry, they don't want a girl who's been pawed over by other guys. Their strange logic seems to be: "It's OK for me to have sex with the girl you marry, but it's not OK for you to have sex with mine."

In the Kinsey study, about half the college-level males under age 25 expected to marry a virgin, or at least a woman who had had sex with no one else.[3] That proportion may since have changed, but many men still secretly hold that view. In fact, 63% of the 1979 crop of young men listed in Who's Who Among High School Students in America said they wanted to marry a virgin.

Fact 3. Those who have premarital sex tend to have less happy marriages. On the whole, your chances of being happily married are better if you wait till you're wed to have sex. And the more premarital sex you have, the less likely you'll be happy in your marriage.[4]

Fact 4. Those who have premarital sex are more likely to have their marriage end in divorce. This follows logically from Fact 3. If a couple is unhappy with their marriage, they're more likely to get a divorce. And again, the more premarital sex the individuals have had, the greater the chance of divorce.[5]

Fact 5. Persons and couples who have had premarital sex are more likely to have extramarital affairs as well. That is especially true of females. The Kinsey report shows that women who had sex before marriage were more than twice as likely to cheat on their husbands as women who were virgins at the time of their marriage. The more premarital sex a person has had, the more likely he or she is to commit adultery.[6]

This may well be the most serious consequence of all for a marriage. Few

wives, and even fewer husbands, are able to tolerate--much less approve--acts of adultery on the part of their spouse. In some states a husband may even be held blameless for killing a man if he catches him in bed with his wife. But even in cases where it never gets discovered by the spouse, adultery may well drive a deep wedge between the couple.

Fact 6. Having premarital sex may fool you into marrying a person who is not right for you. Sex can blind you. You may believe you've found real love, when in fact it is only sex which has held you together. Normally the very best built-in natural protection one has against getting into a bad marriage is the fact that an infatuation normally will not last very long. Infatuations are usually measured in weeks or at most months. Give a relationship time and it will die out if it's only infatuation, saving you from a tragic marriage. It's called passing the test of time. It can be a lifesaver. But, there is one catch.

Infatuations Stop Fast--Unless

There is one major exception to the general rule that infatuations tend to break off early. An infatuation will end soon--unless the couple becomes involved in mutually satisfying sexual relations. If that happens, all bets are off on this clue. Sex will frustrate the usual test of time.

Don't Cheat on the Test of Time

Usually, the longer a couple stays together and has a good relationship, the more certain they can be that it is real love. Why does this test not apply if they start to enjoy sex?

The answer is simple enough. They may stay together just for the sex, and not because they have a lot of things in common. They keep coming back for sex, not for the full companionship of meshing personalities. Thus they cheat

on the test of time.

Studies indicate a good sexual relationship may hold a couple together as long as three to five years. But that's about it. Sex alone will not keep a couple together longer than that. So if they have no more in common than good sex, the relationship will wither away.

Good sex can fool you. A couple may think, "Well, the studies show that the longer a couple spends in courtship and engagement, the more likely it is that they've found real love. We've been going together three years now, so that must mean it's real love." Well, maybe so, maybe no. Three years together may mean that a relationship is good--but it may just mean that the sex life is good.

Since sex is so deceptive, this is one of the most important reasons to resist having sex early in a relationship. You need to be very sure that the rest of your relationship is on sound ground before you muddy up your emotions with sex.

If you don't wait, you've robbed yourself of one of the best of all safeguards to keep you from acting rashly on an unsound relationship. Is it worth it to forfeit this kind of protection against future disaster, just for the sake of a few present thrills and joys? Quite apart from the moral and religious issues or disapproval by parents and society, this fact alone seems reason enough to hold off on sex. You need the test of time working for you, not against you. Those who cheat on the test of time cheat no one but themselves.

"Making up" The Test of Time

"But we're already involved in satisfying sex relations," one couple told me. "We think we love each other, but we want to be quite sure before we

marry. Is there any way we can still apply the test of time to our relationship?"

A lot of couples face this problem. There is a way out for those who really want an answer, but the remedy is not easy. As in any experiment in science, the variable--in this case, sex--must be isolated. That is, the relationship of the couple must be observed and tested apart from the sexual factor.

What the serious couple probably must do is arrange a rather lengthy separation, so they can't get at each other sexually for many weeks or even for a few months. They can stay in touch by mail and phone, but they must avoid all opportunities for sex. If their interest in each other survives the crisis of being apart that long, it's a pretty good sign that their interest involves love, not just sex alone.

"But," couples ask me, "why must we stay apart? Can't we just vow not to have sex for that same period of time, and go on seeing each other as usual?"

No. The reason is simple. Once a couple has established a habit of having sex, it is almost impossible for them to be together without it. One kiss leads to another. Like the alcoholic who sneaks one drink, they may find that they just can't stop. So a conscious choice to get away from each other for a fairly long time is the only way they can lay claim once more to that crucial test of time.

The decision to stay apart must be the couple's own. If parents or others try to force such a separation, the couple may just set their brakes and vow to ride out the test period. Then they rush back into each other's arms. The separation test won't work unless the couple themselves want to make it work. It's a bitter pill, but it's the only sure cure--and well worth the swallowing.

The next two facts are best taken together.

Fact 7. Persons and couples with premarital sex experience seem to achieve sexual satisfaction sooner after they are married. HOWEVER--

Fact 8. They are likely to be less satisfied overall with their sex life during marriage. That is, they adjust to sex more quickly, but their overall adjustment is less satisfying than it is with couples who wait for sex until after they wed.

Learning to have good sex is in part a physical skill. In that sense it is like learning to play the piano or to ride a bicycle. You don't just sit down to the keyboard and rattle off a sonata by Mozart. Nor do you hop on a bike for the first time and sail off down the road. At first you make some mistakes. The more you practice any motor skill, the better you get at it.

Thus your first sexual experience is not likely to be all that great, especially if you're female. Both of you are bound to be a bit clumsy. It will take time for virgin newlyweds to get their sex life in order, no matter how much they love each other. But once they get the hang of it, their sex life tends to be happier than that of those who have experienced sex before marriage. Thus virgins at marriage have better sex lives.

One reason sexually experienced persons may be less satisfied with their married sex life is that their premarital sex experience can rise to haunt them. Suppose that a certain wife has an orgasm about half the time when she and her husband have intercourse. She almost never has more than one climax during coitus. That is, in fact, well above the national average. According to the Hite Report, only about 30% of the women in the study could orgasm regularly from intercourse.[7] But what if the man she marries has had sex with other partners before? Isn't he likely to compare his wife's sexual "performance" with that of his previous partners?

People differ widely in their sexual nature and skills. Some are highly active, some are more reserved. What if in the past this man had sex with a woman who had several "whoopee" orgasms each time they had intercourse? This

is not common, but it does happen. Will his memories of such experiences help or hinder his adjustment to sex with his wife? Will he be satisfied with his wife's more reserved response? Her responses are quite normal, yet he may feel cheated and unhappy.

Now suppose that this same sexually typical woman is married to a man who, like herself, has had sex with no one else. The only sex they have known is with each other. Are they not much more likely to be fully satisfied with the sex life they share? What they have is good, so they're happy with it. The statistics are clearly on their side.

Married Sex is Best

Almost any wife and husband can work out a happy sexual adjustment if they love each other. Any loving couple's sex life is likely to be just fine. When they have a warm, compatible relationship, they can with very few exceptions work out a good sex life. A recent Redbook magazine poll of tens of thousands of married men and women reveals that the vast majority are satisfied with their sex life together.[8]

Sex in the context of a meaningful, lasting relationship is by far the best. If you've never had sex with someone you truly love, you just don't know what sex is all about. Sex at only the physical level scarcely scratches the surface of deep meaning and true satisfaction. In fact, it's hardly even human. After all, any old dog or hog can perform pure sex. The purely physical concept of sex is quite beneath us as human persons. It's not worthy of our best selves.

Total Sex

No matter how skilled and exotic and explosive a merely physical sexual experience may be, it cannot begin to match total sex. Total sex involves the

completion and conjoining of total personalities. It merges the minds, the emotions, and the social and spiritual selves of a couple, as well as their two bodies. The two truly do become one.

Author Bill (My Shadow Ran Fast) Sands is an ex-con who made good. He hammered home this point about total sex to students at the University of Wisconsin-Platteville a few years ago. Some of the students were stunned by his words.

A young man asked Sands what he thought about having sex with others besides his wife. He replied, "I see no point in it. Why should I settle for hamburger when I can have steak?"

It seems he had found a truly fine love, and with it a fine sex life. There's more to good sex than a breathless bounce in bed.

If You're Engaged--Why Wait?

Couples who have avoided sex while dating are more likely to become sexually active once they're engaged. "After all," they reason, "we fully intend to marry. We're already publicly committed to each other, even if it's not yet in writing. If we take care to avoid being discovered and if we avert pregnancy, why wait?"

On the face of it, the arguments sound convincing. But what if you do get discovered? What if the woman does get pregnant? And what if you break up? One out of every three engagements in the United States is broken, and premarital sex is in itself one contributing factor.

Smart couples will not fail to consider these facts. But even if none of these things happen, there is one other grave danger that is overlooked far too often.

Premarital sexual experience may actually deprive you of much of the

sexual joy you can and should have after you marry. By rushing into the joys of premarital sex, you may rob yourself of the deeper, more permanent joys of total sex. Fact 9 explains how and why this can occur. Unlike most of the facts we have discussed, this one applies as much or more severely to those who have had sex with nobody other than the one they marry.

Fact 9. Poor premarital sexual habits can be carried over to spoil sex in marriage. Sadly enough, this happens a lot. The Kinsey studies found that more than half of American wives are in some degree either not willing or not able to share sex freely and fully with their husbands. They have guilts and fears. They are hesitant or inhibited.

It's been a long time since the Kinsey research, and this high frequency may be lower now. Still, many wives--and to a lesser extent their husbands--have poor attitudes about sex.

Why is this so? A number of reasons are frequently cited. Our society still clings to some early Victorian prudery about sex. Then, too, many Christians have adopted St. Paul's view that sex is "of the flesh" and hence to be shunned. They believe it is at best something that is not quite nice. Then there has no doubt been poor sex education in home, church and school. And unhealthy attitudes have been handed down by our elders. In all, Americans do have lots of "hang-up hangovers" from the past.

But in addition to these more familiar reasons for lack of sexual enjoyment is a factor that has escaped the attention it deserves. What is this culprit? It is premarital intercourse, along with other guilt-producing premarital sex acts.

Sexual Salivation

I have labeled the process by which premarital sex spoils marital sex

"sexual salivation." We all know about the famous experiment of Pavlov and his pooch. When shown food, the dog would salivate--its mouth would water. Each time the dog was shown food, Pavlov rang a bell. Soon the dog was trained (or conditioned) to salivate any time the bell rang, even when no food was in sight. The real cause of salivation--the food--was gone, yet when the bell was rung, the dog went right on salivating anyway.

So it is with premarital sex. Many sexual "hangups" in marriage have their roots in a similar process. Here's how "sexual salivation" works.

Since premarital sex is a social and religious no-no, illicit sex acts usually produce some degree of guilt, fear, and loss of self-esteem. This can apply to both partners, but it is especially true for women. They feel guilty, since they are doing what they believe they should not do. They lose self-respect, since they are not living up to their own ideals. And they are afraid of two things: getting caught in the act of sex, and becoming pregnant.

So what may happen if you get into a pattern of premarital sex? Whether your engaged or not, each time you have sex, you "salivate"--you feel guilt and fear and loss of self-respect. Over and over again this happens. You have sex, you feel fear and guilt and remorse. In time, all of these negative feelings become associated with the sex act itself. As the dog came to associate food with the bell, you learn to tie sex with unhealthy feelings.

Now suppose you do get married. Once wed, you have no further need to feel guilt, fear, and remorse when you engage in sex. Once the relationship is made legal, you have social license to have just about any kind of sex you choose. So as soon as the ceremony is over, you will suddenly be able to forget all about the past--right? You can fall into your spouse's

arms on the honeymoon and be utterly uninhibited--right? You will shed all that backlog of guilt, fear, and shame like a snake sheds its skin in summer--right?

Wrong! To the extent you learned to associate sex with guilt and fear and shame before the wedding, to the same extent you will feel that way afterward.

Just as with the dog's food, the causes of the response have been removed. Still, every time you two "ring the bell" by having sex, that guilt and fear and shame will come back to haunt you. It may take months or even years for you to recondition yourselves. Only then can your sex life be full and free.

Small wonder so many husbands and wives are inhibited.

Consider the case of Jim and Mary, taken from my own counseling records. They had been happily married for many years. Mary had sex with no one but Jim before they married, but they did have sex with each other for about 18 months before the wedding. They were lucky. They got by without a premarital pregnancy, and they were never caught in the act of sex.

Did that mean they were home free? Hardly. Sexual salivation caught up with them. After 10 years and four children, Mary was still in some measure unable to give herself fully and freely in sex to her husband. Sad indeed.

Now Jim and Mary were not dummies. They had college degrees in sociology. Both became successful social workers. They had reliable information about sex and were alert to new insights in the field of married love.

But they also had a deep interest in religion. It was highly important to them to behave in ways they felt were right. So even though they got by without being discovered or without a premarital pregnancy, sexual salivation took a heavy toll. The price they paid was a dear one—the loss of a full, free sex experience through their early years of marriage. Is premarital sex

really worth all that?

Illicit Sex as Forbidden Fruit

The sexual salivation process before marriage may in part be responsible for extramarital sex--adultery--in later life. Indulging in "forbidden fruit" brings special pleasure and excitement. The watermelon swiped from the farmer's patch tastes far better than the one you buy from him.

Premarital sex is considered illicit, wrong. It is forbidden fruit--which may bring that special pleasure and excitement.

After marriage, sex is no longer forbidden. Couples accustomed to the excitement of forbidden fruit may find married sex to be dull. Might this tempt a spouse to try to find greater excitement outside the marriage bond--another kind of forbidden fruit?

Whether--Plus How Much and With Whom

Let's sum up the nine known facts about sex before marriage. Other things being equal, if you have premarital sex you are more likely to:

1. Break up before you marry.
2. Scare off anyone who wants to marry a virgin.
3. Be less happy in your marriage.
4. Get a divorce.
5. Commit adultery after you marry.
6. Be fooled into marrying for the wrong reasons.
7. Achieve married sex happiness quicker, but
8. Be less satisfied with your married sex life.
9. Spoil total sex due to sexual salivation.

It is not only significant whether you have premarital sex, but also how much you have. The more of it you have, the greater the impact of the nine

facts on your marriage.

It also matters with whom you have premarital sex. If you have sex only with the person you marry, Facts 1 and 9 still apply to you, but for the most part the other seven facts apply less harshly than if you have sex with other persons as well.

But Why Not Try Out Sex?

Some believe they need to test out sex before marriage. Since good sexual adjustment is important, they want to know beforehand what that part of their relationship is going to be like. "You wouldn't buy a car without first trying it out," a guy may say. "So why marry without trying out sex?"

This argument may sound logical, although it implies a highly unflattering view of a young woman. Like Playboy magazine, the guy sees a girl as a "plaything." (Their monthly nude should not be called "playmate of the month," but "plaything of the month.") She is a commodity to be acquired and used, not a life partner to be loved and cherished. That may be fine if he's shopping only for a sex object, but if he's looking for a permanent relationship it leaves much to be desired.

So a lot depends on what the "sex shopper" has in mind. Does he seriously intend to sign a contract, or is he looking just for the fun of it? A smart car salesman quickly spots the "joy ride only" customer. Once he does, he's not likely to allow that person any more trial runs with his merchandise. The smart young woman will do the same with the man who wants to "try her out" in bed. There are several reasons the "try it out first" idea won't hold water--even in a water bed!

The Teacher and the Plumber

Some people make one very big mistake. They assume that sex outside of marriage is going to be a valid sample of what sex will be like within marriage. But premarital sex is not a true test. Consider this case history.

A teacher in her late twenties and a young plumber become close friends. They had a great deal in common. The more time they spent with each other, the more they were certain that their love was real.

But they had one big problem. He said he could not agree to marry her unless they first tested out their sexual adjustment. To this she simply could not agree. She felt strongly that sex was only for marriage. To try it out beforehand, even with one she loved, went against her every belief and feeling. Yet he insisted. He just refused to marry otherwise. Finally, with great reluctance and deep feelings of guilt and fear, she agreed to submit to sex rather than lose her beloved.

Any good marriage counselor could guess how that experiment would turn out. Her nervous fears and guilts made her so inhibited and worried that the sex session was a dismal failure. Convinced that their sex life would never work out, he broke off the engagement, leaving her in a state of shock, and deep depression.

How foolish for the man to assume from one premarital experiment that their whole married sex life would not be good! In the first place, the first sexual experience of any woman is not likely to be all that good--married or not. But if her first sex comes after she's married, the chances for success are far better. Once wed, she need feel no guilt, no fear, no remorse. She can relax and release herself to sex much more fully and freely. Premarital sex doesn't really give sex a fair trial.

It's Not Necessary to Try Sex First

If you have real love going for you, don't worry about your sex life being good. It will be. The exceptions to that rule are so rare that you can safely ignore the issue. If you truly love and respect your spouse, just relax.

You will no doubt be able to work things out in your sex life. If that does not happen quite as soon as you think it should, read some good books or get some counseling to help you out. Mutual love and tender caring are far more important in sexual adjustment than are smooth techniques and wildly erotic responses. Above all, be relaxed and honest and considerate of each other. Nature will take care of the rest.

Sex Is Never An Emergency--that's the title of a recent book.[9] It suggests an essential point that's often overlooked. Sex is the only major human drive that does not have to be satisfied. You can't survive without eating and drinking, but the sex drive can be denied indefinitely. Sex may be important, but it's not crucial to the good life. A person can go a full lifetime without sex and suffer no serious damage. Priests and nuns have been proving that for centuries.

Girls report that some boys try to mislead them on this point. During an especially torrid "breathing hard" session, the boy may get highly aroused. Then his argument goes something like this: "Oh, Suzy, I'm too excited to stop. We've gone this far, you just have to let me go all the way. I'll just die if you don't let me. I've just gotta!"

Well, he doesn't "just gotta!" If he doesn't get to have intercourse right then, he's not going to break out in purple pimples! He won't suffer any permanent brain damage--or body damage either. It won't even stunt the poor boy's growth. He may have to run around the block a time or two before he goes home, but he can do that, and there's always the cold shower.

Then the next time those two had better call a halt to things before he gets so fired up. Some guys try to use force when they get that excited. That can lead to some pretty tense moments, and maybe lots of regrets.

What Every Girl Needs To Know

Girls are more likely than boys to be confused by these strong sexual feelings. Because of our society's double standard, there is a basic difference in what sex means to males and what it means to females. A man may want sex with just about anything that wears a skirt. He can enjoy sex with a pick-up or a prostitute, even though he feels no affection for her at all. But most women in our culture won't have sex with just any guy who happens to come along. For them, love and sex should go together. The typical woman won't agree to sex unless she believes she loves the man.

Unless a woman knows about this basic difference between females and males, she may be in for trouble. Say she goes out with a man she's very fond of. They park in a lonely spot. He comes on real strong with the sex bit. He seems to have international forelimbs--Russian hands and Roman fingers! His advances grow more and more urgent. She doesn't have to read a book to find out what's on his mind. He wants to have sex with her. Should she let him or not?

If she doesn't know the facts of life about guys, she may wrongly reason something like this: "I wouldn't want to have sex with a guy unless I loved him. Johnny clearly wants to have sex with me. That must mean he loves me."

Don't you believe it, Suzy! He may just be looking for a handy solution to his immediate problem. He might have just as much interest in any female who happens to be within reach. The idea of love may never have entered his hot little mind.

The Tenderness Trap

This situation can get even more complex. Suppose Johnny has been around enough to know all about this particular difference between females and males. He knows full well that women seldom agree to sex unless they think there is

real love in the relationship. So what does Mr. Bright Boy do? You guessed it. If all else fails, he may resort to wild and ardent claims of undying love for her.

Now if she's smart, Suzy will be wary. She'd best not believe his claims of love unless his attitudes and actions support his words. Has he over a long period of time fully demonstrated that he really does love her? He's saying, "I love you very much," but maybe what he really means is, "I sure would like to score with you."

We hasten to say that many males have very high principles and would not be guilty of such deceit. But better for a woman to be safe than sorry.

In conclusion, may I suggest two of the main reasons why I think so many of our young people are involving themselves in irresponsible sexual behavior.

One is the public media and movies. If day after day they are bombarded with vivid examples of unmarried near-strangers climbing into bed, they just come to assume that it's the only way to go.

The second is perhaps less obvious but of equal influence. Dr. George Wald, nobel laureate from Harvard, has called this the "generation in search of a future." They have never known one moment of their lives where they were not under the constant day-to-day threat of being annihilated by nuclear holocaust. When asked whether as a biologist he thought our astronauts would ever find intelligent life on other planets, Dr. Wald replied that his main concern was whether when our astronauts return they'll find intelligent life on this planet.

Little wonder that our young people so often opt for the immediate thrill rather than the long term values. "If I don't have sex <u>now</u> I may never get to know what it feels like."

If we are to curb irresponsible sex, we'll have to put a stop to this insane nuclear arms race, and provide enough responsible world law so that nations must settle their differences through courts of law, not weapons of war.

NOTES

[1]From Ray E. Short, Sex, Love or Infatuation: How Can I Really Know? (Minneapolis: Augsburg Publishing House, 1978), Chap. 10, "To Be Or Not To Be--A Virgin," pp. 80-101.

[2]Richard F. Hettlinger, Living with Sex: The Student's Dilemma (New York: Seabury Press, 1966), Chapter 10.

[3]Robert R. Bell and Michael Gordon, The Social Dimensions of Human Sexuality (Boston: Little Brown and Co., 1972), pp. 51-53. See also Kinsey and others, Sexual behavior in the Human Male, (Philadelphia: Saunders, 1948), p. 364.

[4]Ernest Burgess and Paul Wallin, Engagement and Marriage (Philadelphia: J. B. Lippincott Co., 1953).

[5]IBID.

[6]Kinsey and Others, Sexual Behavior in the Human Female, pp. 427-28.

[7]Shere Hite, The Hite Report: A Nationwide Study of Female Sexuality, (New York: Dell Publishing Co., Inc., 1976), p. 229: "Only approximately 30% of the women in this study could orgasm regularly from intercourse."

[8]Radio Interview, WBBM Chicago, October 25, 1977.

[9]Elaine C. Pierson, Sex Is Never An Emergency: A Candid Guide for Young Adults, 3rd ed. (Philadelphia: J. B. Lippincott Co., 1973).

Senator DENTON. Dr. Hofmann?

Dr. HOFMANN. Well, first I think it is terribly unfortunate in terms of the kind of information we need that Dr. Hillabrand has not published the results on his 900 adolescents that he has in his practice with pill-associated amenorrhea. Such a report in the literature would be an unprecedented, unique, and spectacular; findings unparalleled in anybody else's studies.

Second, I would also like to express my appreciation for his commentary on the Bellevue study on their pregnancy program. We do, indeed, know a lot about how to prevent many of the hazards of adolescent pregnancy. Perhaps Dr. Hillabrand is not aware that Bellevue Hospital is a major affiliate of New York University Medical Center. In fact, it is where my office is, and the program that he alludes to is one that I started personally 6 years ago as a comprehensive team demonstration approach in terms of how one could indeed reduce the risks and medical hazards of pregnancy.

I think that the social risks are probably infinitely greater. I would like to clarify that my own position is one of an arch-pragmatist. I think that we do indeed need a great deal more information about the determinants of the decisions surrounding contraception, which in so many respects is a nondecision on the part of adolescents.

My own view is that we have abysmally failed our young. We have failed to provide them with the kind of information and skills in decisionmaking so that when they are out on their own in the situations that Dr. Short so well describes, they are equipped to be able to say no or yes, or whatever; to make at least a reasoned decision. But for the most part they now make no reasoned decisions.

My remarks address the point that when adolescents are sexually active—and I have determined this—it is my obligation to protect them from what I cannot help but see is the infinitely more disastrous course of pregnancy to a 15-, 14-, or 13-year-old. It breaks my heart, so I have to see contraception as a pragmatic answer.

Any choice we might make is not always clearcut, but is a measure of risks and benefits. Maybe we do need to look at this concept more carefully for adolescents specifically. Given two options, any physician operates from, principle of which option is in the better interests of that patient, which prevents long-range consequences more effectively, and which has the least hazards. I know few decisions that I make in which there are not pros and cons.

I will be happy to give you a copy of my specific report which at least cites the information that Dr. Hillabrand says I am misguided in interpreting. This is a review of the world literature, and I believe some reasonably good scientific data has been devoted to this question in such totally noncommercial studies as the Willow Creek study in California, the British London practitioners' study, and the Oxford family planning study. All these projects have looked at the pill in longitudinal case studies for very, very long periods of time.

I think it is an honest difference of opinion. Maybe we need more nonpartisan assessments of this. I have to say that I thought that Miss Chamberlain's program is the kind of thing that really is getting to the heart of it, and something that we really need to look at more.

How do we help young people who, in my estimate, have no role, place or function in society, who are put too often in the deep freeze of unresponsive schools, and who have no chance to be needed or to be wanted? They are no longer the children who are valued by their parents nor yet the adults that are valued by society.

If we do not get around to finding some way of giving adolescents a feeling that they have a place, a role and a contribution to society, I think we are missing the boat very much, and that we will continue to have a problem with what I agree with all panelists here is premature involvement in sexual behavior by youngsters who are not ready to make those kinds of decisions and do not have the skills to deal with the consequences.

Senator DENTON. Yes. Miss Chamberlain's program seemed to have a couple of characteristics that are not shared by some for which our tax dollars pay. She mentioned dignity in dress and propriety in language. I have seen, as you have seen, I am sure, movies used and partially paid for by our tax dollars in which street language is used and in which the decorum is, to say the least, not dignified.

And I wonder if the basic worth of the human being, which is the genius of our Declaration of Independence and our Constitution, is not really at the root of this whole question, and has to do not only with the happiness, as I say, of the two partners, but the prospective product, which is also human and equally dignified.

Dr. Ratner?

Dr. RATNER. I would have to agree with Dr. Hillabrand that the information is now in, and that new information is not going to change the stances that people take. I make reference to Planned Parenthood because they are the greatest distributors of the pill to young people.

Up until 1961, they were known as Planned Parenthood. In the early sixties—I think it was around 1962—they became Planned Parenthood-World Population. Since that time, their prime concern has been controlling population.

Now, the problem we are facing with these two forms of dangerous birth control is that the pill is the easiest to dispense. You just have to swallow it according to schedule. The target of the IUD is mostly women with poor motivation, meaning the poor, because once inserted, it cannot be removed by the client.

Social engineers who keep insisting that the population "explosion" is the primary concern, treat women as if they were expendable. They keep pushing the pill and the IUD not only in this country but throughout the Third World despite the demonstrated dangers.

On top of that, we have the drug industry who make millions of dollars a month on the pill and who are not interested in supporting or publicizing unbiased research which uncover or establish the dangers of the pill or subsidize meetings that impartially discuss the effects of the pill. Their grants are for the opposite purpose.

In a series of papers I have analyzed the past reports of official committees all of whom have approved of the pill.[16] Each one was slanted. As an example the Chairman of the World Health Organization's Committee on the Pill flatly told Professor Salhanik [17] of Harvard, a member of the Committee—other members included drug company representatives and members from the U.S. Public Health Service—that no matter what the doubts were about the pill, it had to receive unanimous approval because of the population problem. Accordingly he would not permit a minority report.

Dr. Louis Hellman, who as Chairman of the Advisory Committee on Obstetrics and Gynecology of the Food and Drug Administration was responsible for two reports on the pill's safety. In the 1966 report—using a new legal definition of safety, benefit versus risk—he concluded that the pill was safe. But in the press conference following the release of the report he introduced "a yellow light of caution" warning. Similarly, following the release of the 1969 report which also claimed the pill was safe, he again reiterated his "yellow light of caution" warning at a press conference. This has turned out to be one of the longest yellow lights of caution in the history of medicine. It seemed to me that what the Government needed on that committee was an electrician to see what went wrong with the switch which seems to be unable to switch the light from yellow to red.

My deepest concern as a physician today is our failure to obtain informed consent from our patients. It is a right which Plato discussed in the third century B.C. when he differentiated between doctors who took care of free men and doctors who took care of slaves.

The doctor who took care of free men recognized that the therapeutic decision had to be acquiesced to by an informed patient. The doctor who took care of slaves, however, lined them up and like "a tyrant" gave his orders.

Today, primarily, as an outcome of the 1970 Nelson hearings, we do require a patient insert with each package of the pill. It informs the woman of the warnings, precautions, adverse effects, and contraindications of the pill. Though it is not as complete and strong as it should be—it is watered down—it did result in a 40-percent drop in the use of the pill. When a woman who is literate reads the patient labeling and has a modicum of intelligence she wants no part of the pill.

Now, I know of no birth control clinic, Planned Parenthood or otherwise who have made available to young teenagers a transla-

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[16] Ratner, H. (Ed.) Editorials from Child & Family, Oak Park, IL. (a) The Pill—I. Reluctant Admissions. 12:98-9, 1973. (b) The Pill—II. The FDA. 12:194-5, 1973. (c) The Pill—III. The Wright Report. 12:290-2, 1973. (d) The Pill—IV. The WHO Report: The Authors. 13:2-4, 1974. (e) The Pill—V. The WHO Report: What It Said. 13:98-9, 1974. (f) The Pill—VI. The FDA Hellman Report, 1966. 13:194-7; 290-1; 1974 and 14:2-6, 1975. (g) The Pill—VII. The FDA Hellman Report, 1969. 14:98-9; 194-5; 290-2; 1975 and 15:2-4, 1976.

[17] Ibid (e), p. 98. "Barbara Seaman in 'The Doctor's Case Against the Pill' (Peter B. Wyden, N.Y., 1969) recounts that 'The members [of the WHO task force] were divided almost equally for and against "endorsing" the pill.' She quotes from an interview with one member of the task force who stated: 'The people who were concerned about population problems had already decided that we were going to deliver a whitewash. Some of the delegates just went home before the meeting ended, so that they wouldn't have to commit themselves on the final vote. I wanted to put in a minority report, but I was told quite firmly that all WHO task force reports had to be unanimous. In the end, I signed.' (p. 248) A former member of the task force told me the same."

tion of the package insert on the pill that can be understood by them so that truly informed consent is obtained. What happens is that if the clinic decides the pill is the method the teenager gets the pill. Or if the provider decides on the IUD the bulk of them get the IUD. In either case the girl is ultimately assured that the method is safe.

The big mistake made in the 1973 Supreme Court decision on abortion was when Supreme Court Justice Blackmun concluded that abortion should be a decision between the woman and her doctor. But the woman does not have the doctor Justice Blackmun had in mind—a family or personal physician who is primarily devoted to her interests. "Her doctor" is a stranger and an abortionist, a doctor who is employed at an abortarium, a killing clinic, who is not interested in the woman as such but in the money and in moving her along to make room for others. At abortion chambers they even abort women who are not pregnant.

Whatever our opinion is about the safety or the danger of the pill—and I must call to mind here that the drug industry avoids the term danger. They first come out with a safe pill, and then a year later they come out with a safer pill, and now Dr. Hillabrand just gave us another safer formula. Danger and risk are just not in their vocabulary when drug companies advertise and physicians following them prescribe.

But it seems to me that we do have an obligation to young teenagers, no matter how far down in age we descend, to let them know in an understandable way that their life and limbs are at risk when on the pill. We have an obligation to prepare and publish, and to make it obligatory that all clinics make available to teenagers unbiased printed material which paraphrases the package insert.

The FDA patient insert which was finally approved would have been much stronger in terms of the literature had it not passed through the hands of social engineers and pharmaceutical representatives. But even with its limitations it does better than the verbal reassurances of providers.

I agree here with Dr. Short that a person has a right to his or her own informed decision. This is the way to raise children to give them practice at decisionmaking even at the ages of four, five, and six, so as to get in the habit of making their own decisions. Ultimately the individual has to make the decision; nobody else can do it for them. After all it is the teenager not the physician or the provider who is swallowing the pill and takes the risk. So we do have an obligation to give them the data on health and we do not need any more data. Our immediate obligation is to make what we know now available to the public at large and to the individual we contemplate prescribing it to.

Senator DENTON. Thank you, Dr. Ratner. I am just going to throw two more questions out there, and I think we can just have a general assent or dissent—an individual assent or dissent about the question.

Eunice Kennedy Shriver recently wrote something about the possible health hazards of the pill and IUD. I quote her:

> No parents should be kept in the dark about their children's exposure to such dangers. No physician should be asked to treat a child without knowing she is on

the pill. No child should be encouraged to bear such risks, including always the risk of pregnancy, alone and in secret.

I would gather that except for Dr. Hofmann, because she has in her qualifications about confidentiality not included that, that the rest of you would agree that given what we have discussed here this morning, it would be advisable to have parents help adolescents evaluate the existing evidence on contraceptives or any other aspect of sexual relations.

In other words, granted that there is an inefficiency in that dialog, and with certain exceptions in parents—for example, the incestuous or insane—should not the average parent have access to the child regarding this decision, which is not just physical and psychological? Should not the parent be permitted to get into that ball game?

Dr. SHORT. I think you are making an assumption that I cannot accept, Senator. Not all of us would take that view, except Dr. Hofmann. I, as a parent of two daughters and three sons——

Senator DENTON. I said I thought all would agree, except perhaps Dr. Hofmann.

Dr. SHORT. Yes, I know, but I do not——

Senator DENTON. You are not going to agree with that?

Dr. SHORT. I do not agree.

Senator DENTON. Go ahead.

Dr. SHORT. The reason is that while I would hope that we have the kind of relationship with our family that if one of my sons or one of my daughters were to consider being sexually active, I would hope that they would have the kind of relationship with us where they would feel that we would try to have their best interests at heart and would do everything we could to help.

But I know from past experience that most young people simply do not have that kind of relationship with their parents. And I think we have got to realize the fact that not all parents—most young people would go right ahead being sexually active without taking any precaution at all if they felt they had to go to their parents, or if they felt the only way they could get any contraceptives was that their parents would be notified about it. I am afraid I would have to disagree.

Senator DENTON. Right. Well, you know, the ruling which was brought up by Dr. Hofmann pertains to prescription drugs and devices and notification of the parent 10 days after the fact. She herself said that she thought parents should be involved, wherever possible, in this whole process. Do you disagree with that?

Dr. SHORT. No, I do not disagree with that at all, but I do think that the panel is not typically representative of the medical community in America. I think most medical authorities would not take the view that the three out of four that are on this panel have taken.

Senator DENTON. Go ahead, Miss Chamberlain.

Miss CHAMBERLAIN. I was going to say that I do agree with what Dr. Short said. In so many instances, there is no family structure there with which to deal.

Senator DENTON. That observation refers to the adolescents with which you have been dealing.

Miss CHAMBERLAIN. Right.

Senator DENTON. There is a nation out there of some 200 million people who resent being told that they do not have any family structure, and the rule being made to apply to that.

Miss CHAMBERLAIN. I agree.

Senator DENTON. And I feel I have to represent them. Certainly, in my State they feel that way.

Miss CHAMBERLAIN. Well, I am for everybody being represented and information not being withheld. I certainly agree with that.

Dr. HILLABRAND. I could verify the fact that the root cause of this thing is this lack of communication or rapport between parents and children. That seems to apply to contraception, to abortion, and everything else. If that is the etiology, why then we should be addressing our therapy to that root cause rather than to be blaming the kids for this.

I used to preach to these kids all the time, "What the hell, I was not brought up that way. What is the matter with you? Did your parents not teach you any better than that? Gee whiz, you should not be doing that."

But they are in a different milieu and environment now in which Senator Denton and John Hillabrand did not grow up, and we cannot appreciate what they are up against in the peer group pressure. And I would have to include the soaps in the peer group pressure.

Senator DENTON. Right.

Dr. HILLABRAND. You are not with it unless you are taking the pill.

Senator DENTON. Right.

Dr. HILLABRAND. Now, the remedy is Miss Chamberlain here, in her approach to this thing to try to repair the family. Now, I will surprise everybody because in our efforts in dealing with these girls that have problem pregnancies, we find very definitely, across the country and around the world, that when we can get that kid back in the arms of her mother, things start to look up again.

Get them both in here and say, "Hey, look, you have got problems. If there ever was a time mom needs you and if there ever was a time you needed mom—you start talking." And to make it easy, you start talking right here. And then they kind of lighten up.

And where we are successful, it is invariably because we reestablished this relationship. And we are amateurs; we are not professionals at it. But that can and will work. If there were some professionals clever enough to do what we are attempting to do in an amateurish way, there is where the therapy is.

Senator DENTON. Well, do not let anyone be misled. I am not in favor of restricting this educational process to the parent and the child—far from it. As a parent of seven children, I know how disastrous that would be.

But I do believe that to make the assumption that since the age-old problem of parent communication and child communication on this subject exists, that therefore we should absolutely exclude the parent—is wrong. Why not try to educate the parent as you draw them into the question with the child, and why not draw in other support people? And that is what we have done in a bill sponsored.

Yes, Dr. Hofmann?

Dr. HOFMANN. I think if you are going to mandate anything, let us mandate parents going back to school themselves and getting some education in terms of teaching and communicating with their kids.

Senator DENTON. That is right, and they will have to do their part in breaking not only the barrier but the misunderstanding.

Yes, Dr. Ratner?

Dr. RATNER. I would say and emphasize that every species has a characteristic mode of reproduction. Even Playboy now agrees that monogamy—two people pairing off to raise their children—is characteristic of the human species.

Children need a longer period of rearing and education than any other young animal. Accordingly the fact remains that the parents are the primary teachers. It is also true that all families are not functioning as well as they should.

Now, to think that since the family is disfunctioning, substitutes are going to function better, especially with the limitation of being strangers, is I think an erroneous notion. The real solution is to help the family to function again.

What I would object to as a former public health officer—I am also senior medical adviser to La Leche International, the largest mothers' organization in the world—is the tendency for governmental and voluntary agencies, to practice what has been called parentectomy. Now, an appendectomy means to cut out the appendix, and a parentectomy means to cut out the parents.

Professional people keep thinking that if you eliminate the parents, you can solve the problems of the young. But it does not work. It is imperative that we bring the parents back into the picture. They are the primary teachers and the primary influence. It is the family that is the cradly of love, the cement of society.

Even the day care movement is disruptive of the parent child relationship. If nature wanted children to be brought up in litters, they would have come in litters. The fact is they are born one at a time, because love is best taught in a one-to-one relationship and to know how to receive love and to give love is the most important gift a child can inherit.

So, I am a bit bothered when we begin to practice parentectomy. I do know that the function of the family, and there is no substitute that matches it, is to help the child to mature and be independent—and to acquire the habit of making his own decisions.

Somewhere along the line—the family may have not done its job. But the fact still remains that when everything else is said, the one who will really be interested—I am, of course, talking for the most part—the place you can always go back to and be received with open arms is the family, not a social agency.

Now, I say it only works for the most part. We have special problems with certain types of dysfunctioning families that need help. But the help whenever possible should be channeled through the family.

Senator DENTON. Thank you all every much for your comments. Let me ask another question.

Do any of you know, when the pill and IUD were being tested for use by the general public, whether that study included a particular class of study which applied to young adolescents only?

Dr. HOFMANN. No, not in this country.

Senator DENTON. No. That seems kind of unfortunate in that we are finding things like cervical cancer with multiple partners, et cetera, and other related——

Dr. HOFMANN. That is not related to pill use, though.

Senator DENTON. No, I know it is not. But what I mean is that there is a specificity of application and reaction on the part of adolescents to sexually-related practices, including, I would gather from what I read in this and even from what you said, Dr. Hofmann, the IUD, the pill, and that sort of thing.

They did not do any, so we are sort of still learning, are we not?

Dr. HOFMANN. Generally, drug testing in minors is a separate set of protocols only after testing in adults, and because of the increased cost, it often is waived.

Senator DENTON. But, ironically, although we call this family planning in the Government, we are dealing with a bunch of 13- to 16-year-olds.

Dr. HOFMANN. Nonfamily planning.

Senator DENTON. Yes. Go ahead, Dr. Ratner.

Dr. RATNER. I think we have to pay tribute to the Washington Post in at least one instance.

Senator DENTON. They are not all bad.

Dr. RATNER. They had a national reporter by the name of Morton Mintz, who shortly after the pill was marketed in 1960, after the first few deaths from the pill were reported from England, began keeping track of the pill. He subsequently wrote two remarkable books: "By Prescription Only," and "The Pill—An Alarming Report." [18]

He was the only science writer in this country who looked at things objectively, independently of the influence of drug companies, social engineers and his paper's editorial position. What he pointed out in his first book was that the approval of the pill was based on a study, of only 132 women who had used it a minimum of 1 year. Dr. John Rock, the foremost promoter of the pill, had said in effect, "This is a physiological method; the pill just imitates nature." [19] Because of this belief everybody was lulled into believing that nothing could go wrong.

As a result the original studies in Puerto Rico failed to survey adequately untoward results. For example, in a study of 838 women conducted by Gamble of Harvard and others, two women died up in the hills. They were dismissed in a footnote as having died from heart attacks.[20] These women were healthy when they entered the study. These women died unattended by doctors. No autopsies were performed.

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[18] (a) Mintz, M. "By Prescription Only." Beacon Press, Boston, 1967.
(b) ———. "'The Pill' An Alarming Report." Fawcet Publications, Inc. New York, 1970.
(c) ———. The Pill: Press and Public at the Expert's Mercy. Columbia Journalism Review. Part I. Winter 1968/69, pp. 4-10; Part II. Spring, 1969, pp. 28-35. Reprinted in Child & Family, Part I. 15:303-12, 1976; Part II. 16:67-80, 1977.

[19] Rock, J. "The Time Has Come." Alfred A. Knopf, Inc., New York, 1963. "* * * they provide a natural means of fertility control." P. 167. "* * * the steroid compounds are the first physiologic means of contraception." P. 168.

[20] Satterthwaite, A. P. and Gamble, C. J. Conception Control with Norethynodrel. J. Amer. Med. Women's Assoc. 17:797-802, Oct. 1962.

The pill promoters were absolutely naive and innocent about the kind of dynamite they were handling. And I would disagree here that a priority is to do additional research in adolescents. The basic physiology of the adolescent is not uniquely different from an older woman. There are some differences, but the mechanism of blood coagulability and thromboembolism, what happens in terms of the liver, and diabetic precursors—I do not want to run through the whole list—basically deals with the same physiological system.

One other additional concern is that when you start an adolescent on the pill, say, at the age of 15; she stays on the pill as long as she is sexually active. She is going to become 16 and 17 and 19 and 20 and 21 and 22 and 23, and by that time the long-term effects of the pill can produce liver tumors and pituitary tumors.

Concerning the latter Dr. Hillabrand told me last night that one law firm in Detroit has four cases of pituitary tumor which they claim were caused by the pill. So, what I am saying is——

Senator DENTON. Well, now Dr. Hofmann is going to disagree with you, I think. She shook her head. But what were you going to say, Dr. Hofmann, before we lost that point?

Dr. HOFMANN. Just essentially that there is very questionable evidence on a lot of the things that Dr. Ratner is saying. In so many ways, I would like to suggest that we not end up in an argumentative debate. I think there are some substantive issues that you and those who hear the evidence which you have already heard will have to decide as to which has weight and merit.

Senator DENTON. Well, Dr. Hillabrand has a point there, that although there is much more data that needs to be gathered and issues that need to be clarified, we do have to proceed now operationally in some fashion.

Dr. HILLABRAND. There is an additional factor, Senator; that is, the pill is not therapeutic for any known disease in the book. You are not prescribing it—whatever they might be, the risks are not justified in terms of therapy, contrasted with the dangerous drugs that we use for treating leukemia. You will accept those because the alternative is death. The alternative to failed contraception is pregnancy, which up to now has never been listed as disease.

So, the truth of the matter is that the pill needs additional justification. And as a rule in the practice of medicine, the first thing has to be for the safety of the patient. So, where there is an opportunity to achieve the same result with a method which is less dangerous, then you are duty and professionally bound to recommend that.

You can cure a sore throat with chloramphenicol or with penicillin. Chloramphenicol kills and cures. Penicillin, except for allergic reaction, will cure. Everybody sees that point, but when it comes to birth control pills and using other methods of avoiding parenthood that are not dangerous, they go blind because of the simplicity and the ease and the effectiveness of the pill.

Senator DENTON. And the financial interests, according to Dr. Ratner.

Dr. RATNER. Yes.

Dr. SHORT. May I add one thing, Senator Denton?

Senator DENTON. Sure, Dr. Short. Let me add one thing and we will turn it over to you.

Now, Dr. Ratner, you are saying that in spite of your feeling that the young woman without a regular cycle should not use the pill, in view of the other common-to-all-ages difficulties and possible threats, we would not be well-advised to have further study just into the adolescent end of this.

And Dr. Hofmann says that in a conservative approach, she would agree that with respect to this young woman without a regular cycle, she would probably go along with this warning here. Are we together on that so that we know what we are learning?

Dr. HOFMANN. Yes.

Senator DENTON. OK.

Dr. HOFMANN. Research could well be done in the whole area of studying ovulation patterns after pill use.

Senator DENTON. Otherwise, Dr. Ratner, you do not feel we have to put money into that?

Dr. RATNER. No. Generally speaking, we already know the pill results in sterility as well as serious and fatal disease.

Senator DENTON. All right. Go ahead, Dr. Short.

Dr. SHORT. I just want to say that I think I would agree with you, Senator, that it would be unfortunate if we simply dwelled on the values or lack of values of the pill or the IUD or something else, because there is a lot of other research going on in birth control methods which may outdate these momentarily.

I think it is also a mistake for us to leave with the impression that I think we might be in danger of leaving, and that is that the major responsibility in this is the woman. We have talked about what her choice is and what she does about pregnancy and what she does about sex.

I happen to believe that we men have copped out just about long enough, Senator. I think just because society comes down harder on the female and the parents come down harder on their expectations of their daughters than their sons, there is no reason to excuse the male in terms of our sexual behavior.

Why should not the male take every bit as much responsibility for what happens to his sperm as we expect the female to take responsibility for what happens to her uterus? Why should it always be the woman that has to say no?

Senator DENTON. All right, sir. Well, I will not disagree with that.

This is the last question: There is a study on the relationship between the pill and hypertension which states that the use of oral contraceptives for younger women is "relatively contraindicated" for "younger women in whom a longer-term commitment is likely," and you touched on that.

There is another study which suggests that the "effect on the risk of myocardial infarction persists after the discontinuation of long-term use of oral contraceptives." What we are seeing, then, is evidence that health risks associated with the pill may increase if the pill is used for many years, and that the danger may continue after the pill is no longer used.

Do we agree that if a woman starts using oral contraceptives in her adolescence, she obviously has a greater chance of using them for many years? In light of this, and especially since there is widespread pill usage among adolescents and it is a relatively new oc-

currence, should we be stating that because some of the effects of the pill are not seen during the adolescent years, the pill is safe for young girls? This is aside from the one thing we have mentioned here about the irregular cycle.

Yes, Dr. Hofmann?

Dr. HOFMANN. Again, I do not mean to presume on the other witnesses, but I would say that certainly the risk of myocardial infarction over time has to be seen as one of the possible consequences of excessively long pill use. It does depress the part of the blood fat components, called high-density lipo-proteins. These, when elevated, are protective against heart attacks. When they are depressed, they seem to be associated with an increase.

It is the same factor that is uniformly depressed in smoking, which is why smoking plus the pill is additive. My own view would be that maybe there is the possibility of an increase in thrombotic diseases, myocardial infarction and stroke—not thrombophlebitis; that is a different situation—over time—many years—suggesting that contraception beginning in adolescence probably should be dynamic.

I think if I myself were contracepting, I might use the pill during adolescence when I did not really want to have a pregnancy and could not even afford to have the risk. But then I might switch to the IUD when I was somewhat older, when a pregnancy would not really be that disastrous. It might not be when I would want it, but it would still fit into my family life plans. And then I might seek out or ask my husband to seek out a sterilization at a later point in time when my child-bearing life was filled.

So, I do see that there is legitimate suggestion that there may be a need to limit pill-taking to 5 to 7 years; even more so to the use of pills containing no more than 50 milligrams of estrogen. Stadell's recent report in the New England Journal of Medicine summarizing the whole issue pointed out that an under-50 microgram estrogen dose could reduce risks 50 to 80 percent over doses which were over 50 micrograms, which most of patients in studies up until very recently were taking. It is a very specific dose-related effect.

I do not think that the data suggest that there is a relationship between the pill and high blood pressure. The pill may elevate it a point or two, but as far as anybody can see over time, the pill does not cause high blood pressure. It can exacerbate high blood pressure which already exists, and because of the change in clotting factors and increased risk of heart attack and stroke with high blood pressure, you would not want to compound the possibility possibly by giving the pill.

So, it is contraindicated when that situation exists on a theoretical basis, but it does not seem from what I have read and evaluated to increase the probability of such complications on an actual statistical basis.

Senator DENTON. You have referred to recent studies, and so on, and I do hope that between you and Dr. Ratner, we can get what you all would both generally agree is the latest and valid set of findings.

Dr. HOFMANN. Dr. Ratner and I will never agree.

Senator DENTON. You will never agree?

Dr. HOFMANN. Sir, I will submit to you my report and you can do with it what you want.

Senator DENTON. Well, anyway, let us let Dr. Ratner have his last say here.

Dr. RATNER. I do not want to spend any time disagreeing about hypertension, and so forth. Back in 1967, the first reports came in correlating the pill with increases in blood pressure. They have been amply confirmed by a leading authority, Professor Laragh of Columbia University and others and the complication is recognized as such by the FDA and the World Health Organization.[21]

But I want to make one other point. The original pill was highly effective because 93 percent of the time, it knocked out the egg, but in addition there were two supplementary mechanisms which took care of escaped fertilized eggs, namely, impenetrable cervical mucous and a hostile lining of the uterus which blocked the nesting in the embryonic human being.

But as we have decreased the strength of the pill content, the pill has become less and less effective and the secondary mechanisms have taken over. We are still riding on the basis of the original formulation that it is over 99 percent effective. Now, just 3 weeks ago, I had lunch with Dr. John Bonner, who is on one of the task forces of the World Health Organization. He is head of obstetrics at Trinity. He came from Oxford. He runs the Rotunda, which is the big Protestant maternity center in Ireland.

He told me that the World Health Organization has two reports which they are not publicizing. If I remember properly, he told me that they are finding out that some of the preparations are only 70 percent effective, and there are so many irregularities attached to them that people go off the pill in a relatively short period of time.

Senator DENTON. Well, even if there is just a grain of truth in that—and there is certainly truth in what I said about people using all forms—it is folly to box oneself into the question of whether or not use of contraceptives or pregnancy is more dangerous—you are taking the risk of pregnancy when you use the contraceptives.

Dr. RATNER. Yes, but people are getting pregnant on the pill, and that is because as the chemical components are redried in amounts the pill is getting less and less effective.

Dr. HOFMANN. I think you are referring to the progesterone-only mini-pills, are you not, with estrogen——

Dr. RATNER. No. I am talking about the low dose of pills.

Dr. HOFMANN. Above 30 micrograms?

Dr. RATNER. It stands to reason, you know, that if the lower doses of pills reduce the anoyulatory effect, there is going to be a greater possibility of pregnancy.

[The prepared statement of Dr. Hofmann and additional material supplied for the record follow:]

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[21] "Oral Contraceptives: Technical and Safety Aspects." WHO Offset Publication No. 64. World Health Organization, Geneva, 1982. "There is a small but significant rise in both systolic and (later) diastolic blood pressure with prolonged use of oral contraceptives." P. 14.

TESTIMONY OF

ADELE D. HOFMANN, M.D.

Mr. Chairman and Members of the Subcommittee:

I am Adele Hofmann, a board-certified pediatrician, who, for almost 20 years, has specialized in adolescent medicine. I am a past president of the Society for Adolescent Medicine, a past member of the Committee on Adolescence of the American Academy of Pediatrics and the first chair of the Academy's Section on Adolescent Health. Although I am Director of the Adolescent Medical Unit of the New York University Medical Center and an Associate Professor at the University's School of Medicine, the views presented to you today are my own and do not represent the positions of the University.

I have recently completed a review of world literature on the psychosocial and medical aspects of contraceptive use by teenagers commissioned by the World Health Organization, and I appreciate the opportunity to appear before this panel today to present some of the findings of that review that are particularly relevant to the inquiry being conducted here today. As you are aware, Mr. Chairman, this is an extremely timely topic. There has been wide publicity given to the administration's proposed regulation requiring parental notification when adolescents receive prescription contraceptives -- a regulation which the administration justifies in large part on the assumption that prescription contraceptives present a major health hazard for teenagers.

No method of contraception is perfect, either for adolescents or adults: none is completely foolproof and none entails absolutely no risk. However, the risks to adolescents from contraceptive use are minimal and must not be viewed in a vacuum. They must be examined in light of the much greater and well-documented health risks to adolescents of pregnancy, a frequent result of sexual activity in the absence of contraception. According to the Food and Drug Administration's patient packet insert for oral contraceptives, the risk of death associated with all methods of contraception (both prescription and nonprescription) is similar

for teenagers and is roughly one-sixth that associated with pregnancy.

Because each method of contraception entails different risks, I shall examine each individually.

Oral Contraceptives

Oral contraceptives (the "pill") are the most frequent prescription method of contraception used by adolescents, because of their low failure rates and disassociation from the act of intercourse. Legitimate concerns have been raised about the possible effect of oral contraceptives on a young woman's growth, arising from the known ability of estrogen to slow skeletal development. While there were physiological grounds to have suspected that oral contraceptive use might impair growth, there is no clinical evidence to bear out this hypothesis. In fact, there is substantial evidence to the contrary. Numerous studies of young girls specifically prescribed estrogen in order to prevent extraordinary growth have shown that the amount of estrogen needed to inhibit growth is in the range of 10 times the amount used for contraception. In addition, estrogen therapy to inhibit growth has been shown to be significantly less effective if conducted after menstruation has begun. The clinical data show that there is in fact little basis for concern that the amount of estrogen in oral contraceptives given to girls who have already begun menstruating will adversely affect their growth.

A second issue related to oral contraceptive use among adolescents is a concern about a possible inhibition of the maturing endocrine system and a detrimental effect on the eventual achievement of regular ovulation. A highly significant study published in 1980 found that hormonal responses and ovulation returned to normal for the developmental age of the patient following discontinuation of oral contraceptive use. Studies of girls with excessive height given estrogen specifically to arrest growth show that almost all of the patients

returned to regular menstruation within a few months of the end of treatment, even though the dosage of estrogen was approximately 10 times that used for contraceptive purposes. Again, the evidence does not support the claim that the estrogen in oral contraceptives interferes with the achievement of ovulatory regularity in adolescent girls.

In adult women, menstruation and pituitary responsiveness normally resumes within a few weeks after oral contraceptive use is discontinued. At most, the true relative risk of post-pill amenorrhea, or absence of menstruation, is 1 per 1,000 users. No available evidence indicates that amenorrhea following oral contraceptive use is more likely in adolescents than in adult women. The conclusion of several researchers--that post-pill infertility is at best an unfounded concern and at worst a modest problem usually responsive to treatment--would appear to apply to adolescents as well as adults.

Studies have indicated the possibility of an increased risk of several types of cardiovascular disease associated with oral contraceptive use. The major factor contributing to this elevated risk is an estrogen-induced, reversible alteration of blood clotting factors. The degree of pill-associated cardiovascular disease varies with the specific condition involved and the existance of other predisposing factors. For example, age and smoking increase the risk of myocardial infarction (heart disease). Fifteen to nineteen year olds, whether or not they smoke, are at the lowest risk. (The risk of death for nonsmokers in that age group is 1.2 per 100,000 users per year and 1.4 for smokers.) Similar associations exist for cerebral stroke. That the risk of either myocardial infarction or stroke is exceptionally low is further confirmed by the absence in the literature of even one case of a pill-related death of an adolescent due to myocardial infarction, thrombotic stroke or pulmonary embolism. The literature also appears to show that adolescents are not at any greater risk of venous thrombophlebitis than are adults, for whom the

relative risk is two cases per thousand women per year. The literature does show that those conditions contraindicating pill use by adults (such as hyperlipidemia and hypertension) are also contraindications for use by adolescents. For other adolescents, the relative risk of cardiovascular disease associated with pill use is slight.

Particularly because of the long latency period between exposure to a carcinogen and the development of a malignancy as well as because of the enhancement of risks due to long-term exposure, much attention has been devoted to determining if a relationship exists between oral contraceptive use and cancer of the breast, endometrium, cervix or liver. Current data indicate that there is no increased risk of breast cancer due to oral contraceptive use. Only one study has found such a risk and the study design had serious methodological flaws. Moreover, the pill is now recognized as being protective of benign breast disease. Although estrogen, when administered alone, has been shown to increase the risk of endometrial cancer, the progesterone present in most oral contraceptives serves to protect against the precursor state of endometrial hyperplasia seen when estrogen is administered independently. Thus, endometrial cancer is not a concern with oral contraception in women of any age.

Whether oral contraceptive use is associated with an increased risk of cervical cancer or its precursor states, dysplasia and carcinoma-in-situ (precancerous lesions), is not wholly resolved, although the weight of current evidence favors no such association. The recent rise in the incidence of cervical dysplasia among sexually active adolescents and young adults appears to be independent of pill use, since few of those affected were consistent users of any contraceptive method. Far more significant factors now appear to be an early age at first intercourse and increased exposure to sexually transmitted diseases through frequent coitus with multiple sexual partners. The risk of hepatocellular adenoma, or benign liver tumors, recently associated with pill use is also low among

adolescents; the greatest risk is among women over 27 who have taken the pill for at least seven years.

In summary, the existing medical evidence does not substantiate associating a greater risk for oral contraceptive use by adolescents than by women of any age. Rates of pill-related complications are far lower in teenagers than in older women. In fact, it is difficult to discover any case reports of pill-associated complications in women under age 20.

Intrauterine Devices

One significant problem compromising the use of intrauterine devices (IUDs) in adolescents is explusion, but this is primarly associated with whether the woman has or has not borne a child. The overall explusion rate of IUDs is similar in nulliparous adolescents and nulliparous older women (nulliparity being the technical term for women who have never had a child): both have higher explusion and removal rates than parous women (women who have borne children). Problems that may be posed by a small and immature uterus appear to be compensated for by proper-sized devices and insertion skill. Moreover, newer types of IUDs have been found to have significantly lower explusion rates in nulliparous women.

Although there is an apparent relative increase in ectopic pregnancy in IUD users, the evidence does not indicate that this risk is any different in adolescents. Indeed, studies of IUD use in this age group do not reveal even a single case of ectopic pregnancy, although this problem most likely exists at a rate similar to that in older women.

Most studies of fertility following the discontinuation of uncomplicated IUD use among adults have found fertility rates equal to those expected in the general population. The only studies to find either an increased incidence of infertility or a delayed return to fertility have found the problems to be

greatest in women over 25. For all pratical purposes, there appears to be little risk of infertility with uncomplicated IUD use in adolescents.

Pelvic inflammatory disease (PID), an infection of the fallopian tubes, is generally caused by bacteria, primarly gonococcus and chlamydia, but, on rare occasions, by funghi such as actinomyces. PID is a highly significant condition in adolescents and is of most concern in considering IUD-use in this age group, at least for those who are are unmarried. Acute PID is highly correlated with an early age of first intercourse, frequent coitus and multiple partners. Unmarried sexually active young people are at significantly increased risk of PID consequent to an increased exposure to sexually transmitted diseases. This risk is further compounded when an IUD is in place. One large case controlled study found an IUD-related relative risk of 1.6 among women of all ages; the risk increased to 1.9 for women under 25 and 2.6 if two or more partners were involved. Although studies differ as to degree, most show a definite increased risk of PID associated with IUD use, ranging from 3 to 4 times at the lower end of the spectrum to a high of 19 times. Aside from the morbidity (or immediate illness) of PID itself, the major significance of this is for an increased risk of ectopic pregnancy and infertility. IUD users with a history of past PID have a 1:16 probability of a pregnancy being ectopic (if the method fails), as compared with a 1:147 risk in those who do not have an IUD in place. Estimates of infertility following one episode of PID (whether or not it is IUD-related) range from 18 to 37 percent.

In summary, the IUD is an acceptable alternative among married adolescents and among sexually active adolescents who are unable to use other methods of contraception and who have experienced one or more pregnancies. IUD use in this age group, however, should be accompanied by close medical supervision with prompt attention to any suspicious symptoms that may arise.

Diaphragm

The major advantage of the diaphragm is the almost total absence of medical risks or contraindications. The literature reveals only a single case of a possible diaphragm-related complication: a user who contracted toxic shock syndrome after being unable to remove her diaphragm. More significant problems are patient bias against this method because it is intercourse-related and because of the requirement of correct insertion and a relatively high failure rate in actual use, particularly among younger adolescents.

Nonprescription Methods

Spermicides or the condom have virtually no side effects, other than an occasional allergic reaction. The only reported risk is an unconfirmed finding of a one percent increase in cogenital anomalities among infants born to women who may have been using spermicides at the time of conception. Serious methodological flaws in this study require that additional research be conducted before a causal relationship is inferred. The major disadvantage of these methods is a low use-effectiveness rate, unless spermicides are used in conjunction with a condom.

Condom use does have some features that make it particularly attractive for adolescents. Condoms are easily purchased and relatively inexpensive. Moreover, condom use has the added advantages of protecting against sexually transmitted diseases as well as promoting male responsibility.

Withdrawal

There would be much to commend withdrawal for adolescents were it only more effective. It is always available; requires no advance planning, purchase or conscious acknowledgment of sexual activity; and is well-suited to the spontaneous patterns of adolescent coital behaviour. But method failure rates range

between 20 and 25 percent--only marginally better than no method at all.

Natural Family Planning

Despite the absence of any adverse health consequences other than a high probability of an unintended pregnancy, natural family planning generally is not a suitable method of contraception for adolescents. The method depends on a woman's ability to predict the "fertile" period--a task that is almost impossible in young teenagers with irregular ovulatory cycles.

Summary

Oral contraceptives, condoms and foam (singly or together) and the diaphragm all have a significant place in family planning initatives for adolescents. The intrauterine device should be added to this list for married adolescents and, selectively, for those who are unmarried but have failed repeatedly with other methods, have experienced one or more past pregnancies and can be treated promptly in case of intervening pelvic infection.

With the exception of an increased risk for pelvic infections in IUD users frequently exposed to sexually transmitted diseases, contraception in adolescents appears to be remarkably safe. There are no greater complications from oral contraceptives in this age group than in other age groups and in all instances risks are equal to, and in some cases less than those experienced by women age 20 to 25. In particular there is no confirmed evidence that estrogens interfere with pubertal growth or the achievement of ovulatory regulation; in fact, considerable evidence exists to the contrary. The only hypothetical concern relates to questions about total lifetime use of the pill in light of estrogen-associated lipid changes and possible implications for future cardiovascular disease.

There is a good argument that adolescents should not be sexually active

because of the possible consequences for their physical and emotional wellbeing. However, whether we like it or not, we must recognize that, for a host of complicated reasons, young people are making the decision to engage in intercourse. As parents and as a society, we have failed to convince many teenagers to refrain from sexual relations and, as a society, I believe we have an obligation to help our young people avoid inflicting serious harm on themselves. As a physician, my primary duty is to protect the health of my young patients and I cannot condone withholding contraception from a sexually active adolescent who requests it because the toll occasioned by an unplanned pregnancy in adolesence is far, far too high. I could only justify withholding contraception if I had grave concerns about the ability of my patient to give fully informed consent and, in my experience, the overwhelming majority of adolescents--even young adolescents--given appropriate guidance and counseling suitable to their cognitive level of maturation, are quite capable of providing and understanding all the information necessary to make a wise contraceptive choice.

At the same time, as a parent and as a physician, I believe most young people can benefit from the advice of their parents or other family members and I strongly encourage my patients to consult with a family member. Indeed, I devote considerable time to helping them do so. In this way, I feel I can strike a reasonable balance between protecting the young patient from harm--a goal which I believe most parents share--and helping to foster family communication on an important but sensitive topic. Ultimately, however, confidentiality is a sine qua non for many adolescents as it is for many older women. A requirement of parental consent prior to the provision of services, parental notification after services are provided or any other mandate for parental involvement will serve to deter a significant number of teenagers from seeking care with serious consequences for their health. When measured against the costs of an unwanted and ill-timed pregnancy in a sexually active adolescent, the benefits of contraception by any method far outweigh the risks. Childbearing too soon in a young teenager's life not only places her health and that of her infant in jeopardy but also forecloses her personal options for the future, too often consigning her to a life of poverty and untoward hardship.

INTRAUTERINE DEVICE (IUD) AND ACTINOMYCES

SENATE TESTIMONY

HEALTH ASPECTS OF ADOLESCENT SEXUAL ACTIVITY

SUBCOMMITTEE CHAIRED BY:

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INTRAUTERINE DEVICE (IUD) AND ACTINOMYCES

Intrauterine device (IUD) is the second most commonly used method of contraception in the world. It is estimated that out of nearly 60 million IUDs in use worldwide, nearly 3 million women of the active reproductive age group (14-44) employ IUDs in this country. Present popularity of the IUD stems from its relative cheapness, effectiveness, and generally accepted safety and reversibility.

Despite being convenient and popular, the use of IUD has always been controversial. Since its inception, infections and explusion of the IUD were noted as frequent complications among young nulliparous women. Infections, local, intra abdominal, and generalized have been associated with the use of IUDs. Many changes including use of monofilamentous carrier thread, changes in design and shape and availibility of IUDs in various sizes have been made. Recommendations and precautions for use of IUDs have been modified in order to minimize the complications and make IUDs more acceptable by women and nullipara who have smaller uteri and other internal organs.

Currently in the U.S. available IUDs fall into two groups: (i) mechanical type (lippes loop, saf-T-coil) and (ii) medicated which may have metal like copper (Cu-7, Cu-T devices) or may be impregnated with hormones (Progestasert). Irrespective of the design all IUDs have a monofilament synthetic 'tail' with which the IUD communicates with the external enviroment thus permitting an easy access to the infective organisms from outside to invade

the uterine cavity. Additionally, the device alters the intrauterine milieu making it more conducive for the growth of certain microorganisms.

Actinomyces are a group of higher bacteria which normally do not occur in the female genital tract. These organisms, however are commonly found in the oral cavity and in the intestinal tract. In the genital tract of women actinomyces appear to be acquired by oral route. Till about five years ago actinomyces infection of the female genital tract has been rare. Less than two hundred cases are recorded in the world literature. This infrequent documentation of actinomyces infection probably resulted from the rather non-specific clinical signs and symptoms of these patients and more obviously the lack of any reliable and cheap diagnostic procedure.

In the year 1976, we at The Johns Hopkins Hospital in Baltimore observed an occurrence of actinomyces organisms among women using IUDs for contraceptive methods. (Gupta, Frost, Hollander, Acta Cytol.(1976)20:295).

The organisms occur as dark, irregular masses composed of thin, branching filament forms which can be correctly identified in routine Pap smears (Pap test). Some experience in evaluation and correct interpretation of Pap smears is helpful in increasing the specificity and sensitivity of this diagnosis.

Since the original observation, we have investigated over 100,000 women attending The Johns Hopkins Hosptial. At Hopkins, in 10% of the adult female population employing an IUD, actinomyces organisms have been observed in the Pap smears. No data about the incidence of actinomyces among IUD users is available. Depending upon the training, experience, the techniques employed, the socio-economic and geographic origin of the women studied, prevalence of actinomyces among IUD users have been reported between 2.0% to 25%. These organisms have been found to occur only in the presence of a foreign body in the female genital tract, almost always an IUD. Infection can persist for a few weeks even after removal of the IUD. Actinomyces have been observed with all the available types of IUDs. Some investigators have reported a protective effect of Cu-IUD. This appears not to be so. Organisms can be observed as early as six weeks after an IUD insertion, though their prevalence increases with continual usage of the device.

Nearly 25% of women using an IUD and having some local symptoms like vaginal discharge, heaviness, intermenstrual spotting, cramps, pain, prolonged and/or heavy periods have been found to have actinomyces infection detectable in their vaginal smears. It is relevant to note that these local symptoms have been generally considered innocuous and a common accompaniment of IUD usage.

Nearly 50% of women using IUD and attending this Hospital for pelvic inflammatory disease (PID) requiring surgical intervention have also been found to harbor these organisms. Of the women admitted for PID, IUD has been observed in 37% and 40% of the cases in Arizona and Vermont respectively. Definition and diagnostic criteria for PID are imprecise presently. It is estimated that nearly 187,000 women using IUD develop PID every year. Nearly 20%-25% or 46,000 of these women develop tubal and other inflammation and they probably become infertile.

PID in the presence of actinomyces is more serious clinically requiring extended hospitalization and treatment. During the last 4 years incidence of IUD associated PID has increased from 4 to 20%.

PID is a least 3 to 4 times more common among women using IUDs. The risk of PID is considerably more among young nullipara women, who have had more than one sexual partner or who have had PID before. The risk of PID among such nulliparous women is estimated to be 7-12 times greater than the general female population. Tubal inflammation of some degree is observed in over 50% women using IUDs. Exact figures for development of PID among these cases are presently not available. PID is most common within 6-8 weeks after insertion of an IUD and also after nearly two years of continuous use. In a study in Sweden in school girls between 13 and 20 years of age, nearly 50% IUDs were still in use

after two years of insertion; 25% IUDs were removed because of PID.

Improper diagnosis or inadequate treatment of these women with PID can result in rare but serious complications. Dissemination of actinomyces infection to other parts of the body and deaths have been reported. Most commonly however, the infection causes damage to the fallopian tubes, ovaries, uterine cavity and adjoining bladder, rectum and colon.

Nearly 850,000 cases of PID occur in the United States every year. At the most conservative estimates it can be calculated that IUDs are responsible for 187,000 cases of PID annually. Total medical cost of these cases is estimated to be $75 million annually. At least 25% of these cases are associated with actinomyces, detectable in the vaginal smears. Also, based upon the published information 25% of these women became infertile as a result of tubal inflammation and infection.

Exact management of women found to have actinomyces in their vaginal smears is controversial. In most asymptomatic women found to have actinomyces, removal of IUD is generally considered adequate. In women having local or general symptoms antibiotics should be used after the diagnosis of actinomyces is established.

Because of increasing risk of infertility IUD is not recommened as a mode of contraception especially among nullipara women who plan to have more children.

Magnitude of IUD and actinomyces problem, its nature and sequelae are not known. Incidence of infection, long term effects and socio-economic implications need to be investigated. Use of IUD among nullipara women with resultant tubal scaring and temporary or permanent sterility problems and its cost to the society and nation need to be studied. Problems of ectopic pregnancies, lost and expelled IUD are perhaps only indirectly related to this infection.

Senator DENTON. Well, let me thank you all for your testimony today, and those who came for their interest. Thank you for your time and effort in appearing here today. In each case, your testimony has been valuable.

This hearing stands adjourned.

[Whereupon, at 12:55 p.m., the subcommittee was adjourned.]

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